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ENDANGERED SPECIES ACT

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HEARINGS

BEFORE THE

**SUBCOMMITTEE ON FISHERIES AND WILDLIFE
CONSERVATION AND THE ENVIRONMENT**

OF THE

**COMMITTEE ON
MERCHANT MARINE AND FISHERIES
HOUSE OF REPRESENTATIVES**

NINETY-SEVENTH CONGRESS

SECOND SESSION

ON

**ENDANGERED SPECIES ACT REAUTHORIZATION
AND OVERSIGHT**

FEBRUARY 22, MARCH 8, 1982

Serial No. 97-32



Printed for the use of the Committee on Merchant Marine and Fisheries

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ENDANGERED SPECIES ACT REAUTHORIZATION AND OVERSIGHT

MONDAY, FEBRUARY 22, 1982

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON FISHERIES AND WILDLIFE
CONSERVATION AND THE ENVIRONMENT,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
Washington, D.C.

The subcommittee met, pursuant to call, at 10:05 a.m., in room 1334, Longworth House Office Building, Hon. John B. Breaux (chairman of the subcommittee) presiding.

Present: Representatives Breaux, Hughes, Forsythe, and Sunia.

Staff present: G. Wayne Smith, Jeffrey Curtis, Norma Moses, George Mannina, Jackie Westcott, and Charles Ziegler.

Mr. BREAUX. The subcommittee will please be in order.

Today, we have the first 2 days of hearings on the Endangered Species Act of 1973. This act is perhaps the most forcefully written of the many laws that were passed in early days of the so-called environmental decade. In it, Congress sought to prevent species extinction caused by economic growth and development untempered by adequate concern and conservation. In the years that followed, however, a series of conflicts developed that pitted species, often ones that were virtually unknown prior to the passage of the act, against development projects. In 1978, the act was substantially modified in an attempt to strike a balance between species protection and needed development projects.

During the course of these hearings, we will hear from a broad spectrum of witnesses, ranging from those who believe we must strengthen the act if we are going to afford proper protection of endangered species, to those who believe that the burdens the act places on economic development are still too severe and the act should be further modified to lessen these burdens.

Today's hearings will focus on the role of the States in the endangered species program. The act originally intended that the Federal Government cooperate with the States to protect endangered species and provide for grants to support the State programs. Although more than 40 States have signed cooperative agreements with the Fish and Wildlife Service, the funding for the State grants were eliminated in last year's budget and this year's proposed budget.

We will also have witnesses testify on the recent court decisions involving the Convention on International Trade in Endangered

Species and the bobcat, as well as other issues concerning the international and trade aspects of the act.

Finally, we will hear today from two scientists concerning the role of the act in preserving species diversity and why, from a scientific standpoint, such a goal is important.

I think most of us agree that the goals of the act are noble. Most of us also agree that there have been problems for various reasons with its implementation. Let us resolve to listen to each other and to work together, in a spirit of compromise, to develop legislation that will result in a strong, effective, and rational program to protect endangered species.

Before we hear from our first witness, I would like to ask if Mr. Forsythe, the ranking minority member, or any other member present, has any opening remarks.

Mr. FORSYTHE. Thank you, Mr. Chairman. We certainly appreciate the importance of these hearings and the issues that we will deal with range widely across the spectrum. I for one fully agree with the chairman that the Endangered Species Act is a very important part of the environmental program for this Nation and it should be continued. To find a way that we can get that done and maintain the act's protections is important. Thank you, Mr. Chairman. I welcome these hearings.

Mr. BREAUX. I would also at this time ask to make part of the hearing record a letter received from the Secretary of the Interior, Mr. Watt, although he will be testifying after all of the various interest groups and officials have had a chance to testify, a letter from the Secretary that talks about their review that they have undertaken and points out that they are asking for a 1-year extension of the authorization act and are not now taking a position recommending further legislative changes. They will be testifying of course and we will have an opportunity to question them.

We have a large number of witnesses today. Welcome all of you, as well as the interest groups and interested citizens who are participating and watching the hearing process as we develop our hearing record on the legislation. We welcome everybody. Sorry the room is not larger to accommodate more people, but we will have to make do with what we have.

I ask that the witnesses please try and summarize their testimony. The staff and I have had a chance to review it. We have had it over the weekend and know what the statements say. So to the extent that you can we ask you to summarize the statements so that we might move into the question-and-answer session.

Mr. BREAUX. The first panel consists of State representatives, Bill Huey, secretary, New Mexico Department of Natural Resources, John Newsom, assistant secretary for the Louisiana Department of Wildlife and Fisheries, Douglas Crowe, planning coordinator for the Wyoming Department of Game and Fish, Lonnie Williamson, secretary, Wildlife Management Institute, Dr. Gerard Bertrand, president, Massachusetts Audubon Society, and Roger Pearson, secretary of the South Dakota Department of Agriculture. We welcome you and are pleased to receive your testimony.

Mr. Huey, you are on the list first.

STATEMENTS OF WILLIAM (BILL) HUEY, SECRETARY, NEW MEXICO DEPARTMENT OF NATURAL RESOURCES; DOUGLAS CROWE, PLANNING COORDINATOR, WYOMING DEPARTMENT OF GAME AND FISH; JOHN NEWSOM, ASSISTANT SECRETARY, LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES, ACCOMPANIED BY ALAN B. ENSMINGER, CHIEF, FUR AND REFUGE DIVISION; LONNIE WILLIAMSON, SECRETARY, WILDLIFE MANAGEMENT INSTITUTE; GERARD A. BERTRAND, PRESIDENT, MASSACHUSETTS AUDUBON SOCIETY; AND ROGER PEARSON, SECRETARY, SOUTH DAKOTA DEPARTMENT OF AGRICULTURE

Mr. HUEY. My name is William S. Huey, secretary of New Mexico Department of Natural Resources. I am chairman of the legislative committee of the International Association of Fish and Wildlife Agencies. Copies of my testimony have been furnished to the staff and with your permission, I will summarize the points that are included in that testimony.

Mr. BREAUX. Without objection, everybody has that permission, and all the statements in their entirety will be part of the official hearing record.

Mr. HUEY. I have been involved in the protection of endangered species and working with endangered species for considerably longer than it has been popular. I feel that one of the things incumbent upon us at all levels is to work toward the removal of species from classifications of endangerment rather than to permit the question of endangered species to become a career. The experience that we have had with the Endangered Species Act since its passage has permitted us to develop some recommendations for its improvement.

The International Association strongly supports the concept of the Endangered Species Act and the need for action at the Federal and State levels as well as among the private citizenry to remove endangered species from that classification. The items which we consider to be most important deal with a number of different sections of the act. One, we would like to see a classification included in the act by amendment that would give special consideration to the use of experimental populations toward the recovery of the species from endangerment. As things now stand there are a number of shackles that the law puts on the States or anyone who is working with endangered species when they begin to consider the introduction of the experimental populations.

We would also like to see a change in section 6 of the act which would provide the States a better opportunity to participate in the work of removing species from endangerment. As you pointed out, the current year's budget and the proposed budget do not provide funds for States. We feel that if an atmosphere of partnership among the States and the Federal Government is to exist, that the States should continue to participate in the receipt of funding.

We would like to see an amendment that would provide that any amounts of funds appropriated to endangered species would be divided on a one-third to the State and two-thirds to the affected agencies. We would also like to see a change in the matching formula. Most of the funds that we work with, the Pittman-Robertson

and Dingell-Johnson funds, are on a 25-75-percent formula. We would like to see that same formula applied to the use of endangered species funds.

We would also like to see a review of regulations that have been passed since the passage of the act and to removal of those regulations which do not contribute to the enforcement of the act, those regulations which are broader and apply to more areas than the act gives authority for. We feel that this would contribute to a correction of the practice that has developed and really represents a misuse of the act. A lot of people are using the Endangered Species Act incorrectly and are taxing its credibility by using it to accomplish purposes other than those purposes for which the act was intended.

We would also like to see, Mr. Chairman, some adjustments in the implementation of the Convention for International Trade in Endangered Species [CITES]. Primarily among these would be that area that has to do with the so-called no detriment finding on the export, import of appendix 2 species. We feel that in view of the recent court action it is necessary for Congress to take some action to give that authority specifically to the States and to correct by congressional action language which has been put into question by the action of the court.

We would also suggest that some organizational changes be made, that the responsibility for the implementation of the CITES be returned to the endangered species scientific authority with the deletion of the intermediary committee.

With that, Mr. Chairman, I would close my testimony and request that the order of appearance of the other two representatives with the international association be changed, that Doug Crowe and John Newsom's testimony be switched, with your permission. I would also welcome the opportunity to respond to questions, Mr. Chairman.

Mr. BREAUX. That will be fine.

[The prepared statement of William (Bill) Huey follows:]

STATEMENT OF WILLIAM S. HUEY, ON BEHALF OF INTERNATIONAL ASSOCIATION OF FISH AND WILDLIFE AGENCIES

Mr. Chairman, I am William S. Huey, Secretary of the New Mexico Natural Resources Department and Chairman of the Legislative Committee of the International Association of Fish and Wildlife Agencies.

In that dual capacity, I appreciate the opportunity to present the position of the Association on reauthorization of the Endangered Species Act from the perspective of a state resource administrator with responsibility for implementation of certain cooperative aspects of the program covered by that legislation. I might also add that I have represented the Association and have been a member of the U.S. Delegation at meetings of the parties of CITES in Berne, Costa Rica and New Dehli.

Let me stress at the outset that the Association, with member agencies in each of the 50 states directly affected by the Act, has been a consistent supporter of this legislation and the concept upon which it was based. We worked for its initial passage in 1973 and for adoption of the changes which have been enacted since that time. We are now fully committed to its further extension and we clearly recognize the need for continued operation of the Convention for International Trade in Endangered Species (CITES) for which the Act provides the implementing mechanism.

At the same time we are not blind to the real possibility that the reauthorization could fail unless the Act is amended in a realistic, practical and workable way to insure that the purposes and intentions of the Congress can be more fully realized.

Beyond our fundamental commitment to balanced resource management and the fact that our member agencies in this country have a specific responsibility for in-

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...suring the well-being of fish and wildlife species, there are other evidences of our interest and involvement which warrant special mention:

...Over 40 states have cooperative agreements with the U.S. Fish and Wildlife Service to carry out endangered species activities. Until the start of this fiscal year they were directly employing over 200 people, in addition to those engaged under contractual arrangements, to carry out programs funded under Section 6 grants-in-aid which are not available under the Fiscal 1982 budget and which are not proposed for funding in Fiscal 1983.

...Our state members and the Association have long supported the concept of a non-game program and have worked for passage of model laws to bring all fish and wildlife forms under the management responsibilities of state fish and wildlife agencies and to accord them adequate protection. We are currently working to secure authorization of appropriated funds under the provisions of that Act (Fish and Wildlife Conservation Act of 1980, P.L. 96-366), to get this very important work underway.

I think it is also significant that at least 15 of the states now have some form of income tax check-off legislation to provide funding, on a voluntary basis, for the conservation and management of non-game species, including endangered forms. For the most part, these measures have had wide public and state legislative support.

Notwithstanding our long-standing commitment to this basic concept, however, we are convinced that the Endangered Species Act is not now doing for the concerned resources what was intended either by the Congress or by those responsible for its implementation. In our view, the Act is in serious trouble and a number of its provisions have resulted in expenditure of needless time, energy and funds—not to mention the alienation of other land and resource users.

The reauthorization issue has consequently been the subject of careful study by this Association through its Endangered Wildlife, Legislative and Executive Committees over the past several months. The basic elements of our position were considered at the Association's annual meeting in Albuquerque in September, where they were refined, endorsed and approved by the Executive Committee and the general membership. Collectively they are reflected in the following recommendations for change:

1. *Abolition of the International Convention Advisory Committee (ICAC).*—The Endangered Species Act in its original form provided for implementation of the CITES Convention and authorized subsequent establishment, by Executive Order, of an Endangered Species Scientific Authority (ESSA). In 1979, however, the Act was amended to abolish that body and to replace it with the International Convention Advisory Commission (ICAC) to increase accountability to the Secretary of the Interior and to place professional staff responsibility in the U.S. Fish and Wildlife Service. The intent of the amendment was to have ICAC serve as a scientific advisory commission and to streamline implementation of the CITES convention. The result has been quite different from the intent. The responsibilities granted to Interior have been transferred by agreement to ICAC. The end result has been an additional bureaucratic layer which has compounded the entire problem. In our view the function can best be carried out by the Scientific Authority through an expanded wildlife management-oriented professional staff within the U.S. Fish and Wildlife Service. We see absolutely no need for decisions respecting CITES to be removed from the normal and accountable decision-making process that is used for other forms of wildlife, including waterfowl, and for which there are normal appeal processes and referral to the courts when there are disputes. Further, elimination of ICAC would result in continued savings of upwards of \$300,000 annually. Funding for the staff has already been eliminated from the budget.

2. *Amendment of "no detriment" determination authority.*—We propose amendment to Section 8 of the Act to provide that where a state exercises management authority over a species listed in Appendix II of CITES, the determination by the state agency respecting harvest shall constitute the "no detriment" finding under Article IV of CITES. We propose a further amendment to Section 8 stipulating that, where substantial evidence indicates that domestic populations are not endangered or threatened but such populations are so listed by CITES, United States shall be mandated to take a reservation under CITES procedures. At the present time a limited number or parties to the Convention, present and voting, can list a species on the basis of completely inadequate information concerning its domestic status and with complete disregard not only for that factor but also for the responsibility of state fish and wildlife management agencies.

3. *Over-rule of the bobcat decision.*—We propose amendatory language which would legislatively overturn the decision of the U.S. Court of Appeals for the D.C.

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Circuit in the case of *Defenders of Wildlife Inc. vs the Endangered Species Scientific Authority* (No. 79-2512) which construed Article IV of CITES to require biological information which is difficult to obtain and wholly unnecessary to sound management decisions. The finding of the Court of Appeals in this respect has been rejected almost unanimously by the professional scientific community and the court's mistake in this respect should be rectified by Congress. The decision otherwise could establish a potential precedent which could be applied to other listed forms of wildlife. This Association, a party to the court case in question, has now exhausted its legal appeal options and thus must seek legislative relief by asking Congress to specify the type of data necessary and acceptable to implement Convention requirements under Article IV.

4. *Adoption of language to protect the states from being penalized by federal establishment of critical habitat and other protective features of the Act in cases of state introduction of experimental populations.*—At the present time, if a state fish and wildlife managing agency wishes to introduce or reintroduce an endangered species, the protective features of the Act (Sections 5, 7 and 9) come into play and prevent the legitimate and entirely safe harvest of both resident and migratory populations. The end result is that the states are reluctant to engage in the restoration of endangered forms and the restrictive provisions of the Act become self-defeating.

5. *Amendment of the Act to insure minimum funding for state programs under Section 6.*—The legislative history of the Endangered Species Act of 1973 unmistakably shows that Congress intended that a cooperative, federal-state effort be initiated and sustained. In 1973 the conference report on the legislation stated that "... successful development of an endangered species program would ultimately depend upon a good working arrangement between the federal agencies which have broad policy perspective and authority and the state agencies which have the physical facilities and the personnel to see that state and federal endangered species policies are properly executed." The report also noted that the federal government was directing new, innovative, and expensive programs in the states and should, therefore, bear a significant portion of their costs. It further stated that "... the grant authority must be exercised if the high purposes of this legislation are to be met." It has been a continuous struggle with each Administration and Congress since then to obtain adequate funding to sustain state programs established under the act and the states are now faced with a complete wipe-out of all grants available under Section 6. Clearly the states cannot help to carry out the intent of the Congress unless that situation is remedied.

We, therefore urge the inclusion of a provision in the reauthorization specifying that both federal and state agencies benefit from any moneys appropriated for endangered species programs and that any increases or decreases in appropriations be shared on a pro-rata basis by this federal-state partnership. We also recommend that the cost-sharing formula be changed to provide that the federal share be three-fourths and the state contribution be one-fourth of the cost of covered programs.

6. Finally, we recommend the inclusion of language in the Committee Report which will require that regulations under the Endangered Species Act be limited to those actually necessary to carry out the Act and that these be periodically re-evaluated.

Specific language for the amendments which we propose on each of these points, together with an accompanying explanation for each, is attached as a supplement to this statement.

Mr. Chairman, we believe changes of the type we have proposed are appropriate and necessary if the Act is to more accurately reflect the original intent of Congress. We have, however, limited our suggestions to those matters of most direct interest to this Association and we recognize that these are by no means the only possibilities for improving the legislation.

Be assured that this Association and its members will give full and careful consideration to additional suggestions which may be offered and that we will be prepared to support any which we are persuaded may contribute to the objective of a more viable and effective Endangered Species Act.

It will be our privilege and pleasure to work with your Subcommittee and its staff in any way are able in pursuit of that goal.

Meanwhile, thank you for allowing us to share our views with you this morning.

LANGUAGE REQUIRING THAT REGULATIONS UNDER THE ENDANGERED SPECIES ACT BE LIMITED TO THOSE ACTUALLY NECESSARY TO CARRY OUT THE ACT

It has come to the attention of the committee that a number of regulations promulgated under the Endangered Species Act of 1973 (16 U.S.C. § 1531 et seq.) are

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neither necessary nor appropriate for carrying out the provisions or purpose of that Act. For example, the Department of the Interior, acting through the Fish and Wildlife Service, has issued a rule which, with narrow exceptions, makes it "unlawful . . . for any person to engage in business as an importer or exporter of [any species of] wildlife without first having obtained a valid import/export license." 50 C.F.R. § 14.91(a). As this rule applies to virtually all species, including those which are neither threatened nor endangered, it bears no rational relationship to the purposes of the Endangered Species Act and serves unnecessarily to burden American citizens. Indeed, the rule is a classic example of the unnecessary and burdensome regulations that threaten to arouse the American people's hostility to valuable programs which, if properly implemented, should command public support.

The Committee strongly disapproves of the promulgation of such unnecessary regulations under the Endangered Species Act. To correct this problem the committee requests that no regulation be promulgated pursuant to that Act unless a clear demonstration is made that the regulation is necessary to achieve a specific objective stated in the Act. Similarly, the committee requests that each agency which has issued regulations under the Act review those regulations and rescind any for which such a demonstration cannot be made. Through this process, the agencies will avoid dissipating their resources in enforcement of unnecessary regulations and will focus on programs actually necessary in implementing the Act. The result will be not only to lift unnecessary burdens but also to implement the Act more effectively.

AMENDMENT ON FEDERAL-STATE COST SHARING

Section 6 of the Endangered Species Act (16 U.S.C. § 1535), as amended, is further amended by amending subparagraphs (i) and (ii) of paragraph (2) of subsection (d) as follows:

"(i) the Federal share of such program costs shall not exceed 75 per centum of the estimated program cost stated in the agreement; and

"(ii) the Federal share may be increased to 90 per centum whenever two or more States having a common interest in one or more endangered or threatened species, the conservation of which may be enhanced by cooperation of such States, enter jointly into an agreement with the Secretary."

EXPLANATION OF AMENDMENT ON FEDERAL-STATE COST SHARING

Congress in the Endangered Species Act called upon the States to intensify their efforts in conserving endangered species but established a federal-state cost sharing formula of 66⅔-33⅓ which is less favorable than the 75-25 ratio established in the Federal Aid in Wildlife Restoration (Pittman-Robertson) Program. This amendment would bring the two cost sharing ratios into alignment and thereby do away with the distorting effects of differential ratios which provide an incentive for states to spend limited funds to obtain the greater impact.

AMENDMENT ON FUNDING OF STATE PROGRAMS UNDER SECTIONS 6

Section 6 of the Endangered Species Act (16 U.S.C. § 1535), as amended, is further amended by deleting subsection (i), and section 15 (16 U.S.C. § 1542), as amended, is further amended as follows:

"By deleting the words '1535 and' in the first sentence and by adding the following proviso at the end of paragraph (1): 'provided, that not less than 33⅓ per centum of any amount appropriated shall be allocated to states for programs under section 6(d) of the Act.'"

EXPLANATION OF AMENDMENT ON FUNDING OF STATE PROGRAMS UNDER SECTION 6

The legislative history of the Act makes clear that successful development of an endangered species program was to depend upon a good working relation between federal and state agencies. The conferees noted in 1973 that the federal government was directing new, innovative and expensive programs on the States and should therefore bear a significant portion of their costs. The conference report stated that "the grant authority must be exercised if the high purposes of this legislation are to be met."

Despite these exhortations, the actual performance in funding section 6 programs has ranged between disappointing and dismal. Actual funding levels under sections 6 and 15 are as follows:

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[In million of dollars]

	Section 6	Section 15
Fiscal year:		
1973.....	0	1.77
1974.....	0	4.66
1975.....	0	5.61
1976.....	2	7.47
3-month transaction:		1.76
1977.....	4	9.33
1978.....	4	12.53
1979.....	3	15.87
1980.....	5	16.73
1981.....	4	20.90
1982.....	0	17.56

The recent budget action removing all funds entirely for section 6 programs has generated a deep skepticism among state agencies which have been exhorted to develop programs only to see the funding source totally withdrawn. Over the years it has also been observed that government agencies tend to struggle harder for their own funds than for the funding of other agency programs. The amendment addresses this phenomenon by providing that section 6 programs shall be entitled to a one-third portion of the amount appropriated to the Department of the Interior.

REQUIREMENT THAT UNITED STATES MAKE RESERVATION WHEN LISTING OF A NATIVE SPECIES IS IMPROPER UNDER CONVENTION

Section 8A of the Endangered Species Act of 1973, as amended, (16 U.S.C. § 1537a) is further amended by adding a new subsection (f) to read as follows:

"(f) Upon receipt by the United States of notice that any party to the Convention proposes that a species native to the United States be included in Appendices I or II of the Convention, the Secretary shall gather from the State agency of each state in which such species is found and solicit from the public under the procedures established in section 553 of title 5 information and data regarding the biological status and trade status of the species, which information and data shall constitute the administrative record. Unless the Secretary determines on the basis of that record that the biological status and trade status of the portion of the species resident in the United States are such as to require that the species be included in the Appendix proposed, under the criteria established by the language of Article II of the Convention, the United States shall oppose such inclusion and, if such species is nevertheless included in such Appendix, the United States shall, pursuant to paragraph 3 of Article XV of the Convention, make a reservation with respect to trade in the portion of the species resident in the United States."

EXPLANATION OF AMENDMENT REQUIRING RESERVATION WHERE NATIVE SPECIES IS IMPROPERLY LISTED UNDER CITES

This amendment is designed to prevent recurrence of a serious problem in the implementation of the Convention on International Trade in Endangered Species (CITES). In the past, the parties to CITES have listed as requiring protection from international trade species native to the United States which are sufficiently abundant and secure in this country to make protection under CITES unnecessary. For example, the parties listed the bobcat (*lynx rufus*) on Appendix II as part of a general listing of the entire cat family (*felidae*), without considering any information or evidence as to the actual status of the bobcat in the United States or elsewhere. In the country, the bobcat is a relatively abundant species which is well protected by state regulation and not in need of additional protection under CITES. Its listing in Appendix II is, therefore, wholly improper and has served only to create unnecessary requirements and to divert scarce resources from more necessary wildlife management programs.

To avoid repetition of this situation with respect to other species, the proposed language directs that, whenever a proposal is made to list a species native to the United States on Appendices I or II, the Secretary shall assemble an administrative record of information on the biological and trade status of the species and make a determination on the basis of that record as to whether the portion of such species resident in the United States is properly subject to listing under the language of the

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treaty. That determination must be based on information about the biological and trade status of the species, without regard to other, extraneous factors. Unless the Secretary determines on the record that such information requires that the portion of the species in the United States be listed, the United States is required to oppose such listing. If such portion of the species is nevertheless listed, the United States must take a reservation with respect to the species in this country. That reservation would mean that the United States would not be bound by the Convention with respect to specimens of the species resident in this country but would abide by the Convention as regards specimens of the species originating in other countries.

AMENDMENTS ON EXPERIMENTAL POPULATIONS

a. In section 3 of the Endangered Species Act (16 U.S.C. § 1532), as amended, subsections (7) through (21) are renumbered (8) through (22) and a new subsection (7) is added to read as follows:

"(7) The term 'experimental population' means any population (including eggs, propagules or individuals) of an endangered or threatened species, including offspring arising solely from such populations, that (A) any person authorized by the Act has transported and released outside of the range of the species in which it is deemed endangered or threatened to further its conservation pursuant to the Act and (B) except as provided in the following sentence, is wholly separate geographically from populations of the species that do not meet the criteria set forth in provision (A) of this subsection. A population that would qualify as an experimental population but for the requirement of (B) above may be treated as an experimental population in those areas where, or at those times when, it is wholly separate geographically from populations that do not meet the criteria set forth in provision (A) of this subsection."

b. In section 4 of the Act (16 U.S.C. § 1533) subsections (f) through (h) are redesignated (g) through (i) and a new subsection (f) is added to read as follows:

"(f) EXPERIMENTAL POPULATIONS.—(1) Experimental populations shall be subject to the provisions of this Act concerning threatened species except as provided in paragraph (2) of this subsection. No experimental population of fish or wildlife shall be established in any State before a cooperative agreement for such population has been developed with the State agency of such State. Such cooperative agreements shall contain provisions relating to areas in which the population is to be established, protective measures that will be employed, and such other conservation methods and procedures as are deemed appropriate.

"(2) With respect to experimental populations of fish and wildlife—

"(A) no critical habitat shall be designated without the concurrence of the State agency of the State in which such habitat is located; and

"(B) with respect to any habitat specified in the cooperative agreement referred to in paragraph (2) of this subsection, such experimental populations shall be subject to subsections 7(a)(3) and 7(c) of the Act as though they were species proposed to be listed, but shall otherwise be exempted from the requirements of section 7 of the Act."

EXPLANATION OF AMENDMENT ON EXPERIMENTAL POPULATIONS

This amendment addresses the experimental population issue. While desirable to attempt to further the recovery of endangered and threatened species by introducing individuals into new areas where habitat is suitable, such introductions may result in curtailing existing economic and recreational uses or closing them down entirely.

It is possible, for example, to plant endangered species of fish in suitable rivers and streams but, if so, must all fishing in the area cease because a fisherman might "take" one of the transplanted individuals or its offspring? The Act as it stands provides no flexibility with respect to experimental populations, i.e., if the transplanted species is listed as endangered, then the full panoply of the Act's protections apparently are applicable. Species which range over a relatively wide area could curtail uses as they range. Given this situation, States have been hesitant to become involved.

The amendment would define experimental population as a population of fish, wildlife or plants released in an authorized program outside of the range in which the species is deemed endangered or threatened. The population would be experimental if it is wholly separate geographically from the endangered or threatened population. An experimental population, such as a species of migratory bird, would lose its identity as such for such period of time as it might rejoin the principal population.

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The Secretary is not authorized to establish an experimental fish or wildlife population without first entering into a cooperative agreement with the state wildlife agency in the state in which the population would be established. Experimental populations would be deemed to be threatened species for purposes of the protections of the Act and, except with respect to provisions of section 7 relating to conferrals and biological assessments by federal agencies, as respects the effect of federal agency activities on any habitat specified in a cooperative agreement with the state wildlife agency, the provisions of section 7 would not be applicable. Protective measures for such populations would be a subject of the cooperative agreement with regulations to implement such measures deemed necessary.

AMENDMENT OVERRULING DECISION OF APPELLATE COURT IN BOBCAT CASE

Section 8A of the Endangered Species Act of 1973 (16 U.S.C. § 1537a), as amended, is further amended as follows:

"a. By deleting subsection (d) in its entirety and redesignating subsection (e) as subsection (d).

"b. By adding a new subsection (e) to read as follows:

"(e)(1) With respect to species of fish or wildlife included in Appendix II of the Convention which are lawfully taken in a State, the Secretary shall advise that export of a species will not be detrimental to the survival of that species and shall grant an application for export permit if the species is subject to management by the State agency of the State where the specimen is taken.

"(2) With respect to other species of fish or wildlife included in Appendix II, advice as to whether export will be detrimental to the survival of such species shall be given by the Secretary on the basis of biological information and management techniques utilized in modern wildlife management. The Secretary shall not be required to use estimates of population size in advising that export will not be detrimental to the survival of a species.

"(3) Any person, after exhausting available state administrative remedies, may present to the Secretary information regarding the management program adopted by a State agency for a species included in Appendix II of the Convention. If the Secretary, on the basis of information so presented or other available information, determines that there are reasonable grounds to believe that a management program adopted by a State agency for a species included in Appendix II is not based on biological information or management techniques utilized in modern wildlife management, the Secretary shall request that such State agency submit available information regarding such management program to the Secretary. If the Secretary deems the information submitted by the State agency adequate to establish that such management program meets the standards established in the preceding sentence, he shall issue a decision to that effect, which shall constitute final agency action. In a civil action filed against the Secretary, the courts shall provide relief, if any, by remanding the proceeding to the Secretary to hold the hearing described in the following sentence. If the Secretary deems the information submitted by the State agency inadequate to establish that the management program meets such standards, he shall initiate an adjudicatory hearing to determine whether that program meets those standards.

"(4) If the Secretary determines on the record after opportunity for an agency hearing as described in the preceding paragraph that a management program which a State agency has adopted from a species included in Appendix II of the Convention is not based on biological information and management techniques utilized in modern wildlife management, the Secretary shall advise as to the effect of export of specimens of that species taken in such State on the survival of that species and shall grant or deny permits for export of such specimens as if the species were not subject to management by the State agency of that State; provided, however, that the Secretary in advising as to the effect of export and granting export permits shall continue to act under paragraph (1) of this subsection until he makes the determination described in this paragraph and shall resume doing so as soon as the State agency adopts a management program for the species which meets the standards set forth in this paragraph; and provided, further, that such standards shall not be construed to require use of estimates of population size.

"(5) A civil action to review any decision, determination or finding made by the Secretary pursuant to this subsection may be brought only in a judicial district in the State whose management program is at issue."

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EXPLANATION OF AMENDMENT OVERRULING APPELLATE COURT DECISION IN BOBCAT CASE

The purpose of the language of this amendment is explicitly to overrule the decision of the U.S. Court of Appeals for the District of Columbia in *Defenders of Wildlife, Inc. v. Endangered Species Scientific Authority*, No. 79-2512 (D.C. Cir., February 3, 1981). The court held that a valid no-detriment finding on bobcat cannot be made under the convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) without a reliable estimate of the total bobcat population in a state. The ruling of the court is neither biologically sound, nor is that information required by the court's ruling generally available. The amendment makes clear that population estimates are not required for no-detriment findings in connection with species listed in Appendix II of CITES.

Although wildlife and fishery managers have vigorously investigated the matter of assessing abundance of resource stocks, no unified approach exists with respect to estimation of abundance of an animal population.¹ A wide range of fish and wildlife management decisions are made on the basis of population information derived from a myriad of techniques. Direct methods for estimating population numbers have been included in this effort but many decisions are based purely, and reliably, on population information derived by indirect methods. For example, the size of the population of most species of migratory birds cannot be established in terms of absolute numbers and the situation respecting migratory birds is similar to that for most other wild animal populations. The condition of a wildlife population is monitored by a variety of techniques that yield information used in evaluating the status of the population.² As these data are accumulated over time, they reflect trends and call attention to changes in the population. Habitat surveys, indices of population size, and harvest data are used to evaluate population status. Requiring wildlife management decisions to be based on estimates of total population numbers is contrary to modern wildlife management as practiced for most species in this country.

The amendment also recognizes that under our federal system the states have primary legal authority for protection and management of fish and resident wildlife. In the case of species native to the U.S., the provisions of CITES relate only to export trade therein and do not control taking of the species within a state. Where a species is subject to management by a state wildlife agency, the decision of the state agency to permit taking of fish or wildlife ordinarily indicates that the population is at a level well above the level at which there would exist a threat of extinction within the state. The decision of a state wildlife agency to permit taking of a species involves a regime which provides at least the assurance of a no-detriment finding called for by Article IV of CITES. Moreover, the state-by-state findings provide a far more specific and responsive mechanism for safeguarding fish and wildlife populations than is possible on the basis contemplated by CITES which addresses the status of a species throughout its entire range. The states will generally constitute smaller geographic control units than is contemplated by CITES in the concept of the range of a species.

The amendment establishes a presumption that the management decisions of state fish and wildlife agencies are based on sound wildlife management. When taking of a species listed in Appendix II of CITES is subject to management by a state fish and wildlife agency the bill would require the Secretary to make a no-detriment finding and grant an export permit for specimens lawfully taken in the State. In order to assure that state agency decisions are based on modern wildlife management techniques, the bill provides that if the Secretary has reasonable grounds to believe that a state management program is not based on biological information or management technique utilized in modern wildlife management, the Secretary may request information from the state concerned. If, after receipt of further information, the Secretary is not satisfied that the program meets the standards set forth in the Act the Secretary shall convene an adjudicatory hearing to determine the matter. Judicial review, in the State whose management program is at issue, is made available to test the Secretary's determination of reasonable grounds and also his determination following an adjudicatory hearing.

The amendment also abolishes the International Commission Advisory Committee which has not proved to be a useful tool in implementing CITES.

Mr. BREAUX. Mr. Crowe.

¹ Stephen A. Miller, Estimating Animal Population Numbers: a State-of-the-Art Review, Rocky Mountain Forest and Range Experiment Station, U.S. Forest Service, 94 (in-print).

² Final Environmental Impact Statement Issuance of Animal Regulations Remitting the Sport Hunting of Migratory Birds, U.S. Fish and Wildlife Service, 3 (June 1975).

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STATEMENT OF DOUGLAS CROWE

Mr. CROWE. I am Doug Crowe, Wyoming Department of Game and Fish. I am here to speak to the last issue addressed by Mr. Huey, an amendment to the Endangered Species Act offered by the International Association of Fish and Wildlife Agencies, which would make the States the determining authority in nondetriment findings for the exportation of wildlife under the auspices of CITES.

It is our contention that the States are much better equipped to make determinations relative to nondetriment in species that are resident in the individual States. There is much more expertise at that level than at the Federal level, and much more familiarity with local conditions and situations.

In that regard, I would also make reference to the recent court finding that reliable, in quotes, "reliable" population estimates are necessary in order to make a nondetriment finding, and submit to you that that is not a necessity. Wildlife resources are routinely managed without absolute numerical estimates of the population level. As you see, I have included some examples in the testimony that I submitted to you. I will not go through those examples specifically unless some member of the body would so request. I reiterate, this amendment would put the authority back with the States as far as nondetriment findings for the export of resident species for which they have management authority, and that is where that authority belongs.

Mr. BREAUX. Thank you, Mr. Crowe. I may have some questions. [The prepared statement of Douglas Crowe follows:]

STATEMENT OF DR. DOUGLAS M. CROWE, PLANNING COORDINATOR, WYOMING GAME AND FISH DEPARTMENT

Mr. Chairman, I am Douglas M. Crowe, speaking on behalf of the International Association of Fish and Wildlife Agencies. I hold a doctorate degree in zoology from the University of Wyoming, where I did extensive research on reproduction and population dynamics of bobcats (*Lynx rufus*). I participated as an expert witness in the "bobcat suit" (Defenders of Wildlife vs Endangered Species Scientific Authority-Civil Action No. 79-3060) in the U.S. District Court in Washington, DC on December 3-6, 1979. I served as representative of the fifty states on the International Convention Advisory Commission in 1980-81. Currently, I am Planning Coordinator for the Wyoming Game and Fish Department and in that capacity organize and coordinate long-range research and management plans for Wyoming's wildlife resources.

I am here to endorse the amendment offered by the IAFWA overruling the decision of the appellate court in the bobcat case. Section (c)(1) of that proposed amendment provides that when a state allows the lawful taking of a species that this taking is not "detrimental to the survival of that species." Adoption of this philosophy would do much to quell the turmoil that has accompanied the requirement of a federal non-detriment finding prior to the authorization of wildlife exports. It is well established that the primary responsibility for the conservation and management of wildlife resides with the individual states. It is at this level that the bulk of biological knowledge and management expertise is applied to the conservation of this nation's wildlife resources. When a decision is made that the taking of a species will be allowed, that decision is based upon a body of scientific information collected and analyzed by experts familiar with local conditions and extremely concerned with the maintenance and perpetuation of wildlife. Where there is any shadow of a doubt that the taking of a species would be detrimental to its survival, this taking would not be allowed.

The information used to make a non-detriment finding may, or may not, be based upon an estimate of the total number of individuals of the species that are present in the state. Usually it is not, nor does it need to be. Indirect indices of species abundance and vigor are most often utilized. By way of example, the Wyoming Game

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and Fish Department annually collects the following harvest and user data for bobcats: 1. Number of license holders; 2. Number of animals harvested; 3. Location of harvest; 4. Effort expended to harvest an animal; and 5. Age and sex ratios of harvested animals.

Data from items 1-3 allow a determination of the number of hunters afield, the number of animals harvested by these hunters and the location of this harvest. Taken over a period of years these data provide information on the trends in hunter numbers, trends in the number of animals taken per hunter, and insight into which areas within the species range are subject to harvest and which are not.

Item 4 provides data on the difficulty of harvesting an animal. This monitoring of hunter effort expended per animal taken serves as an indicator of the trend in population numbers.

Age and sex ratios (Item 5) also provide an indicator of population status. The number of animals in each age-class of a harvested sample is indicative of population trends and the ratio of males to females is important in estimating future productivity.

These data, considered in concert and over a period of years, provide all the necessary information upon which to base decisions of whether to allow harvest of the species, and, if harvest is to be allowed, at what rate to allow it.

Similar data systems are maintained by all states for the species harvested within their jurisdiction and the success of wildlife conservation efforts in this country attests to the effectiveness of this management approach.

Mr. BREAUX. John Newsom, do you want to present your statement?

STATEMENT OF JOHN NEWSOM

Mr. NEWSOM. Thank you, Mr. Chairman.

I am John Newsom, assistant secretary of the Louisiana Department of Wildlife and Fisheries. My purpose in being here today is to spell out some of the problems that we have had in trying to comply with the endangered species program over the years, and to address three particular issues with which we have some special interest.

The State of Louisiana has long recognized the plight of certain species occurring in our State which at some point in recent years showed a decline in population numbers; for example, the alligator and brown pelican. As early as 1958, the State initiated an intensive research and management project for the alligator. Since that time, Louisiana has emerged as a leader in alligator research and management.

Although the early research projects were diverse in scope, their primary objective was to provide input into the management of this species as a renewable resource. Complementing research was a concerted effort to reduce illegal kill, by enactment and strict enforcement of effective State and Federal laws governing the taking, possession, and transportation of alligators and their products. In 1970, such legislation was in effect in Louisiana. With the implementation of the amendment to the Lacey Act that same year, nationwide laws regulating the interstate shipment of illegally taken animals became effective. As early as the late 1960's, alligator populations demonstrated dramatic increases in areas where well-planned management programs had been initiated.

Because of its value and vulnerability, however, the alligator requires special regulations which must be designed to closely regulate the harvest of surplus animals and yet instill in land managers an incentive to develop and properly manage this valuable resource. In 1972 our department authorized the first alligator har-

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vest program since the statewide season closure in 1964. Since the initiation of the alligator harvest program in 1972, approximately 60,000 alligators have been harvested within the State. Alligator population surveys indicate this species is alive and well in Louisiana under the current State management program. Annual statewide census surveys indicate a 10- to 15-percent increase in population each year. Total statewide population figures numbered approximately 500,000 animals in 1981.

The demise of the Louisiana brown pelican population has been well publicized. In 1968, 7 years after the brown pelican ceased to nest in our State, the Louisiana Department of Wildlife and Fisheries and the Florida Game and Fresh Water Fish Commission jointly undertook a program to reestablish the species by stocking previously occupied range along the Louisiana coast with young birds from Florida colonies. Several governmental agencies and private organizations showed enthusiastic interest and participated in the original organizational phase of this program.

Reproduction was first reported in 1971, when eight young birds were fledged. Approximately 350 young brown pelicans were fledged in two established breeding colonies in 1981. The success of this program can be attributed to the enormous effort put out by the States of Louisiana and Florida. Our State has long supported the concept of a nongame program and hopefully other States can use the wealth of data accumulated by Louisiana's brown pelican program on similar reintroduction programs in their States.

Now for some recommendations for changes to the act.

The intent of the Endangered Species Act of 1973 was admirable; however, problems immediately arose because the U.S. Fish and Wildlife Service used an outdated and unsubstantiated list of so-called endangered species prepared in 1968. This almost immediately put Louisiana in an adversary position regarding the endangered species program. Species included on the 1968 list were placed in the 1973 act without an update or an adequate review by the affected States and over the vehement objections of a number of affected States.

A good example of such improper listing is the alligator. The Louisiana Department of Wildlife and Fisheries petitioned the U.S. Fish and Wildlife Service as early as 1971 to remove the alligator from the endangered species list; however, this request was denied by the Service, as far as we are concerned, without justifiable cause. Most State agencies agree that the alligator should have never been included under the 1973 act. Adequate State and Federal laws—especially the amendment to the Lacey Act—were in effect as early as 1970 and provided the necessary protection for the species. Had affected States been more involved with the listing and delisting process, the alligator would have been omitted from the 1973 act.

Next to improper and demonstrated unnecessary listing of species, implementation of the act with resulting regulations—and interpretation of regulations—has caused the greatest difficulties for this State agency. Many regulations implemented since passage of the act in 1973 have been vague, cumbersome, complex, and in general unnecessary. Since 1973, Louisiana has conveyed such problems to the U.S. Fish and Wildlife Service on many occasions at

formal meetings, by responses to many and varied Federal rule-makings, by letter at the Governor's level, and by numerous telephone conversations. These efforts by our department have for the most part gone unrewarded. An excellent example of this is the endangered/threatened species permitting procedure. We feel the criteria for issuance of permits are excessively stringent, time-consuming, and unnecessary.

Beginning in 1974, Louisiana requested and was issued several endangered species permits along with three delistings in order to continue a statewide alligator research and management program. The timespan for issuance of Federal permits and rulemakings, once the necessary forms and data were submitted, averaged 7 months for permits and 26 months for rulemakings involving changes in classification status—delisting.

The first alligator delisting was for a three-parish area in Louisiana and took the U.S. Fish and Wildlife Service 18 months to complete. The second request for delisting the classification status of the alligator in nine coastal parishes involved a 3-year waiting period before the Louisiana petition was finalized by the Service. The excuse given for these delays was "insufficient data submitted in Louisiana's original petition"; however, the data used by the Service in its final determination was not substantially different from the original data submitted 3 years earlier. The third delisting required 2 years to complete.

Control of captive populations of various resident species of wildlife and hybrids is the responsibility of State government and should therefore be exempt from the act. In many instances, research with captive wildlife has provided a wealth of information that has proven to be valuable to the management of wild populations; one good example is research on a captive population of alligators at Rockefeller Refuge in Louisiana. The fate of captive populations has absolutely no bearing on survival of that particular species or similar species in the wild. Current Federal law regulating captive wildlife simply makes redundant work for farming programs and does absolutely nothing for the species. Today, alligator farmers must be permitted by the State and by law submit an annual report on all activities which include transactions, deaths, escapes, number of nests, and number of young produced. The U.S. Fish and Wildlife Service also requires alligator farmers to obtain a Federal farming permit and submit reports on all activities annually.

Louisiana takes the position that overturn of the court decision in the bobcat case is vital to a State's ability to manage any resident species. It is totally unnecessary, time-consuming, and expensive for the States wishing to export a resident species to annually develop and submit a complete scientific package on the status of any species.

The State of Louisiana fully concurs with the statement made by the International Association of Fish and Wildlife Agencies to the Senate Subcommittee on Environmental Pollution regarding the amendment of "no detriment" determination authority, and I quote:

We propose amendment to Section 8 of the Act to provide that where a state exercises management authority over a species listed in Appendix II of CITES, the deter-

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mination by the state agency respecting harvest shall constitute the "no detriment" finding under Article IV of CITES.

In conclusion, Louisiana contends the general attitude at the Washington level concerning the endangered species program implementation does not encourage management of a wildlife species, particularly wildlife programs which feature utilization. As the endangered species program presently exists, it is a classic example of Federal bureaucratic empire building and regulatory overkill. I submit to you that the apparent purpose of current administration of the act is to obfuscate, hinder, and obstruct State authority in management of so-called endangered resident species. In Louisiana we believe that utilization of commercially and recreationally important species is the key to managing and maintaining abundant habitat and thus insuring the survival of all species using such habitat.

Thank you for allowing me to share our department's views with you today.

Mr. BREAUX. Thank you very much.

[The prepared statement of John D. Newsom follows:]

PREPARED STATEMENT OF JOHN D. NEWSOM, ASSISTANT SECRETARY, LOUISIANA
DEPARTMENT OF WILDLIFE AND FISHERIES

Mr. Chairman, I am John D. Newsom, Assistant Secretary of the Louisiana Department of Wildlife and Fisheries. I appreciate and welcome the opportunity to present views on an issue to which our Department attaches a high degree of importance—amendments to and possible reauthorization of the Endangered Species Act.

The State of Louisiana has long recognized the plight of certain species occurring in our state which at some point in recent years showed a decline in population numbers; e.g., the alligator and brown pelican. As early as 1958, the state initiated an intensive research and management program for the alligator. Since that time, Louisiana has emerged as a leader in alligator research and management. Although the early research projects were diverse in scope, their primary objective was to provide input into the management of this species as a renewable resource. Complementing research was a concerted effort to reduce illegal kill by enactment and strict enforcement of effective state and federal laws governing the taking, possession, and transportation of alligators and their products. In 1970, such legislation was in effect in Louisiana. With the implementation of the amendment to the Lacey Act that same year, nationwide laws regulating the interstate shipment of illegally taken animals became effective. As early as the late 1960's alligator populations demonstrated dramatic increases in areas where well planned management programs had been initiated. Because of its value and vulnerability; however, the alligator requires special regulations which must be designed to closely regulate the harvest of surplus animals and yet instill in land managers an incentive to develop and properly manage this valuable resource. In 1972 our Department authorized the first alligator harvest program since the statewide season closure in 1964. Since the initiation of the alligator harvest program in 1972, approximately 60,000 alligators have been harvested within the state. Alligator population surveys indicate this species is alive and well in Louisiana under the current state management program. Annual statewide census surveys indicate a 10-15 percent increase in population each year. Total statewide population figures numbered approximately 500,000 animals in 1981.

The demise of the Louisiana brown pelican population has been well publicized. In 1968, seven years after the brown pelican ceased to nest in our state, the Louisiana Department of Wildlife and Fisheries and the Florida Game and Fresh Water Fish Commission jointly undertook a program to re-establish the species by stocking previously occupied range along the Louisiana coast with young birds from Florida colonies. Several governmental agencies and private organizations showed enthusiastic interest and participated in the original organizational phase of this program. Reproduction was first reported in 1971, when eight young birds were fledged. Approximately 350 young brown pelicans were fledged in two established breeding colonies in 1981. A careful monitoring program has been in effect since the birds were first introduced in 1968. Pesticide contamination, egg shell thickness, and

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hatching success are monitored on an annual basis. The success of this program can be attributed to the enormous effort put out by the states of Louisiana and Florida. Our state has long supported the concept of a non-game program and hopefully other states can use the wealth of data accumulated by Louisiana's brown pelican program on similar re-introduction programs in their states. These examples are presented in an effort to demonstrate the effectiveness that state programs can achieve.

The addition of amendments to and possible reauthorization of the Act has been the subject of careful study by our Department for some time. Representatives of the Department have testified on numerous occasions regarding our problems of functioning as a conservation agency under the rigid confines imposed by interpretation of provisions of the Act. We are convinced that the Endangered Species Act is not functioning as was intended by the Congress. As a state agency which has worked with the Act on a daily basis since its passage, we strongly recommend immediate changes to the Act so that Louisiana's wildlife management programs can progress in an orderly fashion. In our view, the Act is in serious trouble and a number of its provisions have resulted in our expenditure of needless time, energy, and funds. The U.S. Fish and Wildlife Service in particular and the federal government in general have suffered a tremendous loss of credibility with our Department and with private land managers, resource users and private interests in our State.

NOW FOR SOME RECOMMENDATIONS FOR CHANGES TO THE ACT

The intent of the Endangered Species Act of 1973 was admirable; however, problems immediately arose because the U.S. Fish and Wildlife Service used an outdated and unsubstantiated list of so-called endangered species prepared in 1968. Species included on the 1968 list were placed in the 1973 Act without an update or an adequate review by the affected states and over the vehement objections of a number of affected states. A good example of such improper listing is the alligator. The Louisiana Department of Wildlife and Fisheries petitioned the U.S. Fish and Wildlife Service as early as 1971 to remove the alligator from the endangered species list; however, this request was denied by the Service, without justifiable cause. Most state agencies agree that the alligator should have never been included under the 1973 Act. Adequate state and federal laws (especially the amendment to the Lacey Act) were in effect as early as 1970 and provided the necessary protection for the species. Had affected states been more involved with the listing and delisting process the alligator would have been omitted from the 1973 Act.

Next to improper and demonstrated unnecessary listing of species, implementation of the Act with resulting regulations (and interpretation of regulations) has caused the greatest difficulties for this state agency. Many regulations implemented since passage of the Act in 1973 have been vague, cumbersome, complex, and in general unnecessary. Since 1973, Louisiana has conveyed such problems to the U.S. Fish and Wildlife Service on many occasions at formal meetings, by responses to many and varied federal rulemakings, by letter at the Governor's level, and by numerous telephone conversations. These efforts by our Department have for the most part gone unrewarded. An excellent example of this is the endangered/threatened species permitting procedure. We feel the criteria for issuance of permits are excessively stringent, time consuming, and unnecessary. Especially when a potential alligator skin buyer is asked for a floor plan of his facilities along with the location and number of bathrooms and five years of records regarding commercial transactions. Ridiculous questions such as these certainly go beyond the intent of the Act.

Beginning in 1974, Louisiana requested and was issued several endangered species permits along with three delistings in order to continue a statewide alligator research and management program. The time span for issuance of federal permits and rulemakings, once the necessary forms and data were submitted, averaged seven months for permits and 26 months for rulemakings involving changes in classification status (delisting). The first alligator delisting was for a 3 parish area in Louisiana and took the U.S. Fish and Wildlife Service 18 months to complete. The second request for delisting the classification status of the alligator in 9 coastal parishes involved a 3 year waiting period before the Louisiana petition was finalized by the Service. The excuse given for these delays was "insufficient data submitted in Louisiana's original petition"; however, the data used by the Service in its final determination was not substantially different from the original data submitted 3 years earlier. The third delisting required 2 years to complete.

Control of captive populations of various resident species of wildlife and hybrids is the responsibility of state government and should therefore be exempt from the Act. In many instances, research with captive wildlife has provided a wealth of informa-

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tion that has proven to be valuable to the management of wild populations; one good example is research on a captive population of alligators at Rockefeller Refuge in Louisiana. The fate of captive populations has absolutely no bearing on survival of that particular species or similar species in the wild. Current federal law regulating captive wildlife simply makes redundant work for farming programs and do absolutely nothing for the species. Today, alligator farmers must be permitted by the state and by law to submit an annual report on all activities which include transactions, deaths, escapes, number of nests and number of young produced. The U.S. Fish and Wildlife Service also requires alligator farmers to obtain a federal farming permit and submit reports on all activities annually. This is clearly a case of unnecessary duplicate management responsibility.

Louisiana takes the position that overturn of the court decision in the bobcat case is vital to a state's ability to manage any resident species. It is totally unnecessary time-consuming and expensive for the states wishing to export a resident species to annually develop and submit a complete specific package on the status of any species. Louisiana recommend establishment of a five-year review of "no-detriment" findings rather than the annual review. The state of the art in wildlife management has not advanced to the point that precise animal population numbers are possible, and more importantly it quite likely never will. It has been repeatedly and consistently demonstrated that knowledge of actual numbers is not necessary for management of any species. Currently available and acceptable techniques for managing wild populations of animals have historically been used in establishing harvest regulations without detriment to wild populations. The current court decision was obviously without basis in biological facts, and if allowed to stand will seriously curtail a state's ability to manage all species of wildlife. One more point should be made—regulations governing wild populations are not made in a capricious manner—but rather are the result of careful deliberation by most qualified and dedicated and professional wildlife managers.

The State of Louisiana fully concurs with the Statement made by the International Association of Fish and Wildlife Agencies to the Senate Subcommittee on Environmental Pollution regarding the amendment of no detriment determination authority and I quote: "We propose amendment to Section 8 of the Act to provide that where a state exercises management authority over a species listed in Appendix II of CITES, the determination by the state agency respecting harvest shall constitute the 'no detriment' finding under Article IV of CITES. We propose a further amendment to Section 8 stipulating that, where substantial evidence indicates that domestic populations are not endangered or threatened but such populations are so listed by CITES, the United States shall be mandated to take a reservation under CITES procedures." At the present time a limited number of parties to the Convention, present and voting, can list a species on the basis of completely inadequate information concerning its domestic status and with complete disregard not only for that factor but also for the responsibility of state fish and wildlife management agencies in that respect.

In conclusion, Louisiana contends the general attitude at the Washington level concerning the Endangered Species program implementation does not encourage management of a wildlife species, particularly wildlife programs which feature utilization. As the Endangered Species Program presently exists it is a classic example of federal bureaucratic empire building and regulatory overkill. I submit to you that the apparent purpose of current administration of the Act is to obfuscate, hinder and obstruct state authority in management of "so-called" endangered resident species. In Louisiana we believe that utilization of commercially and recreationally important species is the key to managing and maintaining abundant habitat and thus insuring the survival of all species using such habitat.

It will be our privilege and pleasure to work with your Subcommittee and its staff in any way possible in pursuit of a viable and effective Endangered Species Act. We sincerely hope that the Act is amended in a realistic, practical, and workable way to insure that the purpose and intentions for which it was originally conceived by Congress can be more fully realized, we will continue to work toward that end.

Thank you for allowing me to share our Department's views with you today.

Mr. BREAU. Next we will hear from Mr. Lonnie Williamson.

STATEMENT OF LONNIE WILLIAMSON

Mr. WILLIAMSON. Thank you, Mr. Chairman.

I am Lonnie Williamson, secretary of the Wildlife Management Institute.

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We believe that the Endangered Species Act of 1973 is necessary legislation that must be continued if certain of the Nation's important wildlife are to be perpetuated. But we believe also that there are some minor changes that could be made in the act to improve the national endangered species management program.

With regard to critical habitat, one of the more controversial issues for the Federal program, we think such designations undoubtedly restrict the type and extent of activity that can be accommodated within their boundaries. Protecting and improving habitat, however, is the most basic and important management action required to perpetuate and restore endangered species populations. Without it, other efforts are futile.

We realize that some critical habitat designations may cause problems sometime in the future, if carried to an extreme under the current act. It is quite possible that numerous listings of invertebrates, especially insects, as endangered, and subsequent habitat designations could get out of hand. If this were to be the case, a line will have to be drawn somewhere. If such a situation occurred, plus the fact that limited resources are available for endangered species management, this would suggest that priorities may have to be set. Some tough choices on whether to protect the habitat of certain lower life forms would have to be made. We recommend that the subcommittee give this problem serious thought in developing legislation to reauthorize the act.

The Institute suggests that the International Convention Advisory Commission could be abolished without detriment to endangered species management. It has served no useful purpose, in our view, and its demise would permit authorized funds to be invested in more important endangered species activities. The scientific authority for the Convention on International Trade in Endangered Species [CITES] is a responsibility of the Interior Secretary. The Secretary has at his disposal in the U.S. Fish and Wildlife Service ample expertise to serve as the scientific authority and as advisers. Additional expertise is available in the National Marine Fisheries Service.

With regard to the appeals court decision on bobcat, there is apprehension that the court decision ultimately may be interpreted to require similar wasteful expenditure of scarce funds to compile other unnecessary estimates of various other wildlife populations before they may be taken for any purpose. The status of bobcats and most other wildlife is monitored by use of population trend data and habitat analysis rather than by actual counts, which are extremely difficult and expensive, and in many instances, impossible to obtain. Relative numbers are much easier to obtain and completely adequate to use when setting seasons and bag limits for taking most wildlife. This obviously is the case, since many depleted populations have been restored during this century using that reliable and professionally accepted method. We believe, therefore, that the Endangered Species Act should be amended to eliminate the negative impact of the court decision on sound wildlife management programs.

With regard to the States' concern about experimental populations, recent experience has revealed that critical habitat designations can discourage State wildlife agencies from introducing or

reintroducing endangered species into new areas. Such a designation could prevent normal management activities for other species, including a prohibition of taking those nonendangered animals that happen to be in the same area. Thus, the States are reluctant to introduce experimental populations under these circumstances, and restoration of endangered species is hindered. We recommend that the act be amended to permit experimental populations to be established without the normal restrictions associated with critical habitat designation. This is something we believe that the States and the Fish and Wildlife Service can work out together.

The Institute believes that the Endangered Species Act should be amended to make the national effort to manage endangered species a more cooperative Federal-State venture. The success of the endangered species program hinges largely on cooperation of State and Federal wildlife agencies. We believe, therefore, that there should be as much agreement as possible among the U.S. Fish and Wildlife Service and involved State wildlife agencies before any resident species is listed under the act as endangered. The act should be amended to require such consultation. We also believe that the United States should be mandated to take a reservation on species listed under CITES but not listed under the Endangered Species Act. This would return control of the U.S. endangered species program to the hands of U.S. agencies, both Federal and State, with appropriate professional staffs, rather than leave it in the emotion-ridden arena of multinational fiat. This would end the present situation that finds wildlife management programs in this country penalized because of the failure of other nations to get their own programs into gear.

We appreciate the opportunity to comment on the Endangered Species Act and invite the subcommittee to call on us for any assistance we may provide in helping develop specific language for a reauthorization bill.

Mr. BREAUX. Thank you, Mr. Williamson.

[The prepared statement of Lonnie Williamson follows:]

PREPARED STATEMENT OF LONNIE L. WILLIAMSON, WILDLIFE MANAGEMENT INSTITUTE

Mr. Chairman, I am Lonnie L. Williamson, secretary of the Wildlife Management Institute. Headquartered in Washington, D.C., the Institute has promoted the restoration and improved management of wildlife and associated renewable natural resources for more than 70 years.

We believe that the Endangered Species Act of 1973 is necessary legislation that must be continued if certain of the Nation's important wildlife are to be perpetuated. But we believe also that there are some minor changes that could be made in the act to improve the national endangered species management program.

CRITICAL HABITAT

One of the more controversial aspects of the current Federal program is critical habitat designation. Such designations undoubtedly restrict the type and extent of activity that can be accommodated within their boundaries. Protecting and improving habitat, however, is the most basic and important management action required to perpetuate and restore endangered species populations. Without it, other efforts are futile.

We realize that some critical habitat designations may cause problems sometime in the future, if carried to an extreme under the current act. It is quite possible that numerous listings of invertebrates, especially insects, as endangered and subsequent critical habitat designations could get out of hand. If this were to be the case, a line will have to be drawn somewhere. And it will be difficult to draw that line and in

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effect say, "these animals' habitat will be protected and those animals' won't." If such a situation occurred, plus the fact that limited resources are available for endangered species management, this would suggest that priorities may have to be set. Some tough choices on whether to protect the habitat of certain lower life forms would have to be made. We recommend that the subcommittee give this problem serious thought in developing legislation to reauthorize the act.

INTERNATIONAL CONVENTION ADVISORY COMMISSION

The Institute suggests that the International Convention Advisory Commission could be abolished without detriment to endangered species management. It has served no useful purpose, in our view, and its demise would permit authorized funds to be invested in more important endangered species activities. The Scientific Authority for the Convention on International Trade in Endangered Species (CITES) is a responsibility of the Interior Secretary. The Secretary has at his disposal in the U.S. Fish and Wildlife Service ample expertise to serve as the Scientific Authority and as advisors. Additional expertise is available in the National Marine Fisheries Service.

WITH REGARD TO APPEALS COURT DECISION ON BOBCAT

The U.S. District Court of Appeals' decision to mandate "reliable population estimates" before bobcat pelts may be exported under CITES requires wildlife agencies to gather more detailed information than is necessary to manage populations of that species. Furthermore, there is apprehension that the court decision ultimately may be interpreted to require similar wasteful expenditure of scarce funds to compile other unnecessary estimates of various other wildlife populations before they may be taken for any purpose. The status of bobcats and most other wildlife is monitored by use of population trend data and habitat analysis rather than by actual counts which are extremely difficult and expensive, and in many instances, impossible. Relative numbers are much easier to obtain and completely adequate to use when setting seasons and bag limits for taking most wildlife. This obviously is the case since many depleted populations have been restored during this century using that reliable and professionally accepted method. We believe, therefore, that the Endangered Species Act should be amended to eliminate the negative impact of the court decision on sound wildlife management programs.

EXPERIMENTAL POPULATIONS

Recent experience has revealed that critical habitat designations can discourage state wildlife agencies from introducing or reintroducing endangered species into new area. Such a designation could prevent normal management activities for other species, including a prohibition of taking those nonendangered animals that happened to be in the same area. Thus, the states are reluctant to introduce experimental populations under these circumstances, and restoration of endangered species is hindered. We recommend that the act be amended to permit experimental populations to be established without the normal restrictions associated with critical habitat designation.

LISTING

The Institute believes that the Endangered Species Act should be amended to make the national effort to manage endangered species a more cooperative Federal-State venture. The success of the endangered species program hinges largely on cooperation of State and Federal wildlife agencies. We believe, therefore, that there should be as much agreement as possible among the U.S. Fish and Wildlife Service and involved state wildlife agencies before any resident species is listed under the act as endangered. The act should be amended to require such consultation. We also believe that the United States should be mandated to take a "reservation" on species listed under CITES but not listed under the Endangered Species Act. This would return control of the U.S. endangered species program to the hands of U.S. agencies, both Federal and State, with appropriate professional staffs rather than leave it in the emotion-ridden arena of multinational fiat. This would end the present situation that finds wildlife management programs in this country penalized because of the failure of other nations to get their own programs into gear.

We appreciate the opportunity to comment on the Endangered Species Act and invite the subcommittee to call on us for any assistance we may provide in helping develop specific language for a reauthorization bill.

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Mr. BREAUX. Next we will hear from Dr. Gerard Bertrand.

STATEMENT OF GERARD BERTRAND

Dr. BERTRAND. Thank you, Mr. Chairman and members of the subcommittee.

It is with some trepidation I approach the committee. I feel a bit like a chicken thrown into a fox den being here with my State colleagues. Let me say I support the act and support it from State viewpoint. Mr. Chairman, I am the president of the Massachusetts Audubon Society.

The society membership includes 29,000 households in the State of Massachusetts comprising between 75,000 and 90,000 total individuals. MAS owns and operates 17 nature centers throughout the State and has 55 individual sanctuaries totaling more than 12,000 acres. The society is directly involved in wildlife management both on its own land and in cooperation with the State, Federal Government, and private landowners throughout Massachusetts. We are the oldest conservation organization at the State level in the United States. We have been in existence since close to when Mr. Huey's State became a State.

I am here to testify in favor of reauthorization of the act in its present form without fundamental changes. I will address four major points, the first of which is the listing process. We believe that the State, Federal, and international listing processes represent a system of listing protected species that makes appropriate decisions on a global, national, and local basis. We believe these are worth supporting; and each has its own values. I have heard some organizations, particularly those representing commercial interests, say that we should have no State listing process. They are asking for uniformity across the country in the listing process—having our national law superimposed on the States and the elimination of any State endangered species laws.

We feel that State lists have tremendous value in educating the public, and that States should be given the opportunity to list species that they believe are important from the State standpoint, but not necessarily of interest from the national perspective. This is the same way we work our liquor laws, that States can make their own laws and we do not impose uniformity across the country. From the industrial standpoint there is some inconvenience in this. However, given present computer systems, there is no reason the trade association cannot track State lists and determine whether or not trade is allowed in a particular State. I think this is fairly easily done and something that should not be a problem.

The second area I would like to talk about is section 6 of the act. The State of Massachusetts has a cooperative agreement with the Federal Government. Section 6 has worked well for the State of Massachusetts. Under the act we have protected the habitat of the Plymouth red-bellied turtle. (*Chrysemys [c.r.b.] rubriventris bangsi*). Without section 6, we would not have been able to get the rapid and efficient protection of either the species or the habitat involved for the species. Section 6 has worked well for us. The State of Massachusetts needs the funds presented by the Federal Government,

and I hope that you will consider putting money back into section 6 and help support State endangered species programs.

There are two other points that I would like to address, and I am afraid that these are in opposition to what some of my fellow panel members from the States have said. We would oppose the State being the final determining authority on whether or not a "no detriment" finding is issued. Obviously States have individual knowledge of species within their geographic boundaries, and that is a very strong determining factor. However, a State is after all a small geographic entity and cannot make decisions on nationally important species that have ranges beyond those States. Obviously the State voice has to be given more weight, but to change the law and have States make a final determination is unwarranted.

There is no necessity to go ahead and write into the law an automatic reservation clause under the CITES convention. Having been involved in international negotiations for the last 10 years, I can tell you that sending off a negotiating team to a convention with a predetermined fixed position and final outcome is not very helpful from the international negotiating standpoint. There are mechanisms already in the law and already in the CITES convention to take reservations after the deliberation when that delegation returns home with the action of the convention already known. To tie their hands beforehand I think is unwarranted.

My final point concerns some of the things that have been said about the Endangered Species Act. I think an examination of this committee in real detail will show that the act has worked well, that there are few if any major problems associated with the act. Sure, we know about the alligator, the bobcat, and the sea otter, but you can list the species that have caused major problems on two hands, and for the other 95-plus percent of the species both the State's standpoint and the Federal standpoint agree.

I think it would be a real boon if this committee would strongly examine horror stories brought forward by industrial representatives or commercial interests to determine whether or not they are valid. Every time we look at a problem presented, it turns out to be something quite different from endangered species being acted upon. I understand the Montague powerplant will be presented as a horror story. In fact, among the reasons for closing down construction of that powerplant, endangered species were never listed. All the arguments heard were based on economic reasons and not endangered species. I think it would be of use to you to examine those in detail when you meet on the 8th.

Thank you very much.

Mr. BREAU. Thank you, Mr. Bertrand.

[The prepared statement of Gerard Bertrand follows:]

STATEMENT OF DR. GERARD A. BERTRAND, PRESIDENT, MASSACHUSETTS AUDUBON SOCIETY

The Society membership includes 29,000 households in the state of Massachusetts comprising between 75,000 and 90,000 total members. MAS owns and operates 17 nature centers throughout the state and has 55 individual sanctuaries totaling more than 12,000 acres. The Society is directly involved in wildlife management both on its own land and in cooperation with state and federal governments and private landowners throughout Massachusetts.

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Chairman Breaux, members of the Subcommittee, I am here to testify today in favor of reauthorization of the Endangered Species Act, and as a representative of a state wildlife organization to give our perspective on the operation of the present Act, its value to both the public and the wildlife that it protects, and our concerns about certain aspects of the present Act.

As you know, Mr. Chairman, the Endangered Species Act is landmark legislation—nationally and internationally; plant and animal species are declared to be of value to present and future citizens of the United States and are recognized as being in need of assistance. Key in the initial legislation was the development of a listing process for endangered species which allowed comment from citizens, local and state governments as well as businesses. One of the key features of the listing process as it has been interpreted in the last decade has been this public aspect of the process. Massachusetts Audubon Society strongly supports the recognition that the listing process, with provision for public comment, is a major factor in the success of the Act to date. This legislation has been a model adopted by many states and even national governments throughout the world.

The listing process, as it stands today, creates a natural progression of protection from the CITES list, to our national list, and to the lists of individual states. These lists necessarily relate in a network of protection which allows public comment and scientific judgments at levels ranging from global to local. The international list is meant to keynote those species which from global perspective require cooperative international attention; likewise our national list makes judgments about plants and animals from a national perspective by evaluating entire populations and making a scientific determination regarding their status. Individual states cannot make such evaluations outside their own political boundaries. The state lists are extremely important to reflect the status of species within state political boundaries. Some species may occur solely within one state or may have significant populations in one state. In such cases, there is no substitute for biological information gathered at the state level.

The state wildlife heritage of Massachusetts is no less valuable to the citizens of that state than is our national heritage to the public as a whole. Until the last decade the wild turkey had been eliminated for more than 200 years in the state of Massachusetts. Its reintroduction and establishment began with total protection and now the bird is no longer threatened but in fact has reached the point that it can again be treated as a game species. The osprey, while secure internationally as a world-wide distributed species, had been locally eliminated in many parts of the world and was in particular trouble in the northeast United States. Thanks to vigorous protection efforts and the elimination of chlorinated pesticides from the environment, the osprey has made a remarkable comeback particularly on artificial nesting platforms. While there is local concern, the species was never endangered nationally. However, it did warrant protection on a state list.

Some national industrial concerns, whose primary purpose is extraction of natural resources, whether oil, gas, mineral or timber would prefer the elimination or standardization of state lists throughout the country. This is understandable since such uniformity reduces costs and makes project planning easier. However, standardization or elimination of state lists would be a mistake biologically and would be costly in terms of species loss and public opinion. States are not identical in their biological resources. The state of Massachusetts, for instance, is broken into 351 townships which are governed by town meetings. There is no political or biological uniformity within the state, nor is Massachusetts identical in these respects to any of its abutting five states. What right do commercial industries have to expect that Massachusetts and abutting states will standardize environmental legislation? Certainly, states are not expected to standardize other laws and regulations such as those pertaining to taxes.

Federal and state governments are independent entities. They cooperate and contribute each to the other for the welfare of its citizens. Federal protection provides the minimum threshold judged to be necessary to protect all of the citizens. Individual states take whatever action is necessary within those thresholds. This is true whether it applies to minimum wage laws, child labor, automobile standards or water pollution. MAS strongly supports the thresholds set by the Endangered Species Act and believes in having a strong international and national list of endangered species. The state itself can exert more stringent management requirements where it sees fit and within its own boundaries provide the management for any species.

State listing makes sense biologically because rapid extirpation of species from states is often the first indication that a species is in trouble throughout its range.

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We believe, Mr. Chairman, that the state-federal cooperative program funded under Section 6 is a critical element of this protection. We also strongly believe that it has not yet been given a fair chance to work. A strong endangered species Act requires a well funded cooperative program. Without this funding through Section 6 states will not have the money to conduct the important recovery programs inherent in the Act. Given the President's budget, there will be less money available for environmental matters. Resultant degradation of land and water will lead to increased numbers of endangered species rather than fewer. The progress of the last decade could be quickly lost since the ability of the states to fund dropped federal programs will suffer an inevitable time delay of several years in most cases if indeed they can be funded at all.

Mr. Chairman, Massachusetts is the third most densely populated state in America. In spite of being highly populated, Massachusetts has set aside 14 percent of its land as conservation land to be held and managed for the benefit of wildlife for the future. The protection of threatened and endangered species has been a critical factor in the development of this large land system. Massachusetts Audubon Society and the Trustees for Reservations have between them 30,000 acres of wildlife lands under strict protection. In addition other nonprofit organizations including land trusts hold another 60,000 acres. State and local governments have over half a million and the federal government has approximately 100,000 acres of conservation land.

The first wildlife sanctuary in Massachusetts was privately owned. This history of private action is more indicative of the eastern United States than our more newly settled western states. The initiatives of eastern nonprofit organizations in endangered species protection has been critical in the success of many protection and recovery programs. This same protection, however, does not exist everywhere. Without the federal action to make such programs possible, we could not possibly have a program as successful or as far reaching as that for the whooping cranes, marine mammals or migratory birds. Likewise, states differ enormously in their ability and willingness to manage wildlife for the benefit of all citizens. A strong federal presence continues to be a must if the states have both the impetus and funds to provide much needed protection.

As you know habitat protection is the key to the survival of the system. The most immediate and pressing need for endangered species is usually critical habitat immediately necessary for their survival. We strongly support the concept of critical habitat and the retention of Section 7 in the Act. An Act without Section 7 would not provide essential protection and would be of much less long-term value. It and the listing process are the cornerstones of the Act.

Within the Commonwealth of Massachusetts, there are many examples of the need for federal and state cooperation in endangered species protection. Massachusetts supports a variety of species common to both northern and southern New England. In fact, some 35 percent of the wildlife species of amphibians, reptiles, birds, and mammals in the continental United States have occurred within a state constituting only 0.2 percent of that land area. Many of these species are residents throughout the year while others are migratory, spending part of the year outside of the state.

Massachusetts has its share of endangered species which included both resident and migratory species. The Plymouth red-bellied turtle (*Chrysemys rubriventris bangsi*) for example, is a resident species occurring only in Plymouth County, Massachusetts. In contrast, the Humpbacked whale (*Megaptera novaeangliae*) occurs seasonally in waters off Plymouth, Essex, Barnstable, and Nantucket counties. These two species represent examples of the need for federal and state cooperation in protecting endangered species. In the case of the Plymouth red-bellied turtle, the state Division of Fisheries and Wildlife, with the aid of Section 6 federal funding has been able to develop programs to protect this endangered species and its critical habitat. Essential authority to protect critical habitat of this species came from Section 7 of the Act.

In the case of the Hump-backed whale, federal protection and research are essential because of the wide interstate range of this magnificent endangered species. However, both state and federal agencies cooperate in protection which is mainly directed towards the species in this case rather than habitat.

In these two examples, the need for close cooperation between federal and state agencies and the need for critical habitat designations are apparent. We believe that Section 6 promotes cooperation and partnership between federal and state interests. Our major concern with Section 6 is that it be adequately funded to effectively support state programs.

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Nonprofit organizations such as the Massachusetts Audubon Society are cooperating with federal and state agencies to study and to protect threatened and endangered species. During the fiscal year, for example, the MAS will hire three people to augment federal and state efforts to protect populations of coastal breeding birds such as Roseate, Common, and Least terns. One of these people will patrol coastal areas and will post sections of beach where significant numbers of terns are nesting. Two other people will conduct research on methods of developing nesting sites for terns on coastal islands.

The MAS is also working with the Natural Heritage Program and the Division of Fisheries and Wildlife to conduct a state survey of salamander populations. Massachusetts is exposed to acid rain and salamanders are useful indicators of environmental quality. Such studies will better document the distributions and numbers of salamanders that may or may not be declining to the endangered point.

In summary, the Massachusetts Audubon Society believes that, in spite of loud cries from some state organizations and industry, the instances where the Endangered Species Act failed to function effectively are vastly outweighed by those where the Act has protected both endangered wildlife and the public interest. Critical analysis of state or industry "horror studies" at this hearing would be a public service that we believe would show the Act as one of Congress' more enlightened legislative actions which does not warrant significant change.

Mr. BREAUX. Now we will hear from Rodger Pearson, secretary of the South Dakota Department of Agriculture.

STATEMENT OF RODGER PEARSON

Mr. PEARSON. Thank you, Mr. Chairman, and members of the committee.

My name is Rodger H. Pearson. I serve as secretary of agriculture for the State of South Dakota. I am pleased to take part in these hearings to determine how the Endangered Species Act might be amended to not only make life easier for my farm and ranch constituents but to strengthen the act so that those same farm and ranch constituents can take the act seriously.

Let me begin by giving you some background on how the act affects my fellow South Dakotans.

As you may be aware, South Dakota is a plains State divided almost in half by the Missouri River. To the east of the river, general farming operations of row crops, small grains, and livestock feeding are abundant. In the West River country, large ranching operations including wheat, cattle, and sheep dominate.

The West River has become infested with prairie dogs. There were 700,000 acres of pasture and rangeland infested with these varmints in 1980. Counties west of the Missouri River accounted for 672,500 acres or 96 percent of the total acreage infested. Total economic damage to pastures totaled \$7.2 million or an average of \$10.29 for every acre infested.

In eastern South Dakota, the problem with rodents has involved pocket gophers and ground squirrels more than prairie dogs. Economic damage by these critters totaled over \$17 million in 1980.

For those of you who may not be familiar with the kind of damage these rodents provide, let me explain. Prairie dogs live in towns making hundreds of burrows. Livestock and horses are often crippled when they step into these holes.

But by far the most drastic of the effects of the prairie dog town is the total loss of vegetation. The animals destroy everything green around the town, and then move on to greener pastures to begin their devastation anew. In an arid climate like South Dakota, that vegetation is essential for feeding our livestock, as well as for

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anchoring the topsoil so precious for continuing such vegetation. When the wind blows in those areas of South Dakota which have been infested with prairie dogs, the sky resembles the era of the Dust Bowl. And, believe me, the wind blows more often than not in South Dakota.

The South Dakota Department of Agriculture has repeatedly applied to the Environmental Protection Agency for a specific exemption to use sodium monofluoroacetate—Compound 1080—for control of prairie dogs in certain western South Dakota counties. Among other reasons for denying the requests has been "the continued existence of the black-footed ferret, which is a federally protected endangered species." The ferret feeds on the prairie dog and could be subject to secondary poisoning from use of certain control agents.

I want to quickly point out that the South Dakota Department of Agriculture tried every other means available to control prairie dog infestations before resorting to requesting the specific exemption. But the use of zinc phosphide and strychnine was of little value, especially on private land adjacent to Federal land where little or no control was used at all.

In 1972, when Compound 1080 was used for rodent control in South Dakota, 60,000 acres were infested with prairie dogs. By 1980, when zinc phosphide and strychnine were the only control methods, infestation had increased to 700,000 acres.

In addition, in September 1980, the Environmental Protection Agency offered in support of its notice against continuing the registration of strychnine for rodent control, a position document, which in part stated, "While the critical habitat of the ferret has not been defined by the USDI [U.S. Department of the Interior], the Agency believes that any area now occupied by prairie dogs must be considered with great concern due to the relationship between the ferret and the prairie dog."

The current Endangered Species Act states,

Except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species.

A Federal regulation defining the critical habitat of all listed endangered species—including the black-footed ferret—should be developed. Present loose interpretation of critical habitat of the black-footed ferret, for example, by the Department of the Interior includes the entire geographical area of South Dakota. A regulation defining critical habitat could not include all areas infested with prairie dogs simply because ferrets are predators of prairie dogs. By specifically defining the black-footed ferret's critical habitat, farmers and ranchers would be free to control prairie dogs in noncritical areas.

The Endangered Species Act of 1973 needs to be amended to include a standard of reasonableness so that the Secretary of the Interior might use a commonsense approach to determine whether to list or delist a species. Such a reasonableness approach with its inherent balancing of all the equities is very much in tune with reality and consistent with the greater economic goals and policies of the present administration.

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Indeed, the courts, in decisions regarding the Mississippi sandhill crane and the snail darter, have refused to establish or apply a reasonableness standard to the stringent requirements of section 7 of the Endangered Species Act. There should be no doubt that the presence of an animal on the endangered species list can have significant economic consequences, both through required routine governmental redtape as well as a result of environmental litigation.

Western South Dakota has a great potential for water and industrial development. However, the unending environmental impact statements that must be filed due to the endangered species black-footed ferret inflate the costs and time involved in such projects.

There has been only one confirmed sighting of a black-footed ferret in South Dakota in the last 10 years. Surely, a reasonable person would conclude that millions of dollars' worth of devastation to hundreds of thousands of acres of land should not continue on an annual basis in order to protect an optical illusion.

Mr. BREAUX. Thank you, gentlemen, for your testimony. The committee appreciates it very much.

The committee is having these hearings without any legislation pending before it concerning the reauthorization of the endangered species legislation. It was the decision of the chairman, in consultation with the ranking minority member, that we will have the hearings and then try and get a sense of what should be the appropriate point to start from rather than come in with any preconceived ideas. This is due to the fact that the administration does not have a package of recommendations at this time. We will proceed with the hearings and then take evidence presented at the hearings and incorporate that into a legislative draft which will be received for markup purposes. That is why we do not have a bill before the committee that witnesses will be asked to comment on.

I would like to start off, Dr. Crowe, with something that I think would be helpful. In the first page of your testimony you state by way of example that the Wyoming Game and Fish Department annually collects the information that you would use in determining the harvest which would be allowed for the bobcat, and you list five things that the State of Wyoming does in determining a population trend. The whole controversy revolves around the question of how much information is really necessary in order to determine whether the take of a species is to the detriment of that species or not. Some have argued that the five categories that you have listed is enough to establish a population trend sufficient to allow the harvest if the trend indicates that it would be safe to do so. Others say you need more than a trend, you need a reliable population estimate. In fact, we have a court decision that requires that. What do you think would be needed in addition to the five steps that you have outlined that the State of Wyoming already takes with regard to the bobcat in order to establish what this new court decision is apparently requiring?

Mr. CROWE. From the trend data that I outlined in the statement, you can indeed make a population estimate, especially if you have those data over a series of years. The longer you have a data string, the more reliable it becomes. The problem as I see it from the court's finding that one must have a reliable population estimate is that there is no operable definition for that term; what I

consider reliable, you might not. Reliable from a management standpoint is that if you have enough of a handle on the trends in that population in order to insure its survival, which you may certainly have from those five data elements I outlined in my testimony. It is not necessary and in fact very seldom does one have an absolute numerical estimate on which he can place tight statistical confidence levels on any species of wildlife which the States manage.

Mr. BREAU. What you are discussing is a definition or an opinion of the degree of reliability of information that you are receiving by either of the two methods?

Mr. CROWE. I think that is really what it boils down to. Reliable is one of those jim-dandy words that can hang you up in a courtroom from now until the end of time.

Mr. BREAU. Can you get a reliable population estimate, in your opinion, from doing the five steps that you have outlined?

Mr. CROWE. You most certainly can.

Mr. BREAU. What would be the next step? If you could get more information, what would you do? It seems like most of the information that you have set out is basically information received by the takers of the species. Suppose you do not have any takers of the species, no licensed hunters or any bag counts or location information on where the harvests were taken. Without hunting you would not have most of this information. Does the State do anything other than just collect the information provided by the hunters?

Mr. CROWE. We do; yes. It depends upon the species under consideration and the degree of concern that the management agency may have on the welfare of that species. If there is no take of the animal in question, then often you are limited largely to how much habitat is available and some observation method on whether or not those animals are still present within that habitat. Usually species that are subject to harvest have a much better ongoing population estimate. You have a much better handle on what is going on in that population than in those species that are not subject to harvest.

Mr. BREAU. That trend obviously would have to be achieved over a period of time. You do not establish a trend just by looking at one season. It would take a number of years. In Wyoming's case how long has the population trend for the bobcat been utilized?

Mr. CROWE. We have trend data since the late thirties and early forties. We have become more sophisticated in the analysis and collection of those data in more recent years, but we can trace trends in the bobcat population back some 40 years.

Mr. BREAU. Someone made the argument that if you want to find out whether you can harvest a species you need to count them to find out how many there are. Why do you not count the bobcat? Could you discuss that for the committee?

Mr. CROWE. You cannot go out and count bobcats. They are one of the most secretive of mammal species and are largely nocturnal. I did my Ph. D. dissertation on reproduction and population dynamics in bobcats, and during that time worked in the field for 4 years every day, and I have worked with the bobcat since that time. As a youth, I trapped bobcats for spending money. This adds up to some 20 years of thrashing around in the back country in

Wyoming chasing bobcats and in that time I have seen one that was not in a trap or somehow had been captured or tagged. You just do not go out and see a bunch of bobcats. This is the root of one of our problems. Well-meaning citizens drive through Wyoming, look out the windshield of their car and seeing no bobcats, insist that they must be in trouble. That is not the case.

Mr. BREAUX. I suppose you would agree with Mr. Williamson's statement where he says that status of bobcats or most other wildlife is monitored by use of population trend data and habitat analysis rather than by actual counts, which are extremely difficult and expensive and in many instances impossible.

Mr. CROWE. I would certainly agree with that. The bobcat is one species that it is impossible to make a direct population count. The state of the art is not there yet. It cannot be done. We most certainly can maintain trend data and insure that a population is not in any danger of extinction from harvest data routinely collected and analyzed by the wildlife department.

Mr. BREAUX. Thank you for your testimony, Mr. Newsom. You talk about the alligator problem on page 2 and you point out that because of State management activities that the population of alligators in Louisiana, for instance, is increasing by 10 to 15 percent increase each year. Now the total population figure, numbers approximately half a million in 1981. How is that determined in Louisiana? Is that by population trend, or do you actually have counts?

Mr. NEWSOM. By alligator nests during the nesting season and the ratio established by the number of nests and the number of alligators that might be produced by the nesting animal.

Mr. BREAUX. Is that different from what Dr. Crowe talked about?

Mr. NEWSOM. We have something stationary to count in the case of an alligator. You can do a count on alligator nests.

Mr. BREAUX. And then you extrapolate and bring that out to an estimate for a population?

Mr. NEWSOM. This is the way it is done; yes.

Mr. BREAUX. You had talked on page 7 about amending section 8, that where a State exercises management authority over a species listed in appendix 2 of CITES, that the determination by the State in their management plan shall in itself constitute a "no detriment" finding. Do you think there should be no Federal role? Do you think that when a State has a management program, that a "no detriment" finding is sufficient to meet the terms of the convention?

Mr. NEWSOM. In our area we feel this is the case, that the State is the agency that has the information that is available, and that information should be used in the "no detriment" findings.

Mr. BREAUX. The reason I am pursuing this is because the point you make further in your testimony is that for years Louisiana has fought on trying to attempt to show in that State that the alligator was not endangered or threatened. The Federal Government for years refused to go along with that recommendation. When the Fish and Wildlife Service finally agreed that it was not threatened, was it based on your information?

Mr. NEWSOM. That is an example of what we are trying to get at with the "no detriment" finding being the responsibility of the State; yes.

Mr. BREAUX. When the Fish and Wildlife Service agreed that the alligator in that area was not threatened, was new information made available on behalf of the Federal Government, or did they basically continue to use your State information, and finally agree with it?

Mr. NEWSOM. There is very little change in any of the data submitted in the final delisting.

Mr. BREAUX. Has the State always submitted the data to the Federal Government?

Mr. NEWSOM. Yes, because we were the only ones actually doing any studies whatsoever, with regard to the level of population.

Mr. BREAUX. Mr. Williamson, you recommend that the International Convention Advisory Commission could be abolished without detriment to the endangered species program. I note that it has been zero-funded last year, and the budget recommends it being zero-funded again. Is that not sufficient? Do you think we ought to statutorily do away with it?

Mr. WILLIAMSON. Yes.

Mr. BREAUX. Is it not giving you a lot of problems without money?

Mr. WILLIAMSON. Not yet.

Mr. BREAUX. It certainly has the potential?

Mr. WILLIAMSON. Yes.

Mr. BREAUX. I like these short answers. On the consultation question, Mr. Williamson, on page 3 of your testimony, you ask that the act be amended to require consultation before the listing of a species as threatened or endangered. I read the act to already require consultation. Is it not being done, in your opinion?

Mr. WILLIAMSON. I do not think it is being done adequately, Mr. Chairman. The idea of Federal and State cooperation in this whole area we think is terribly important.

The Federal Government, through this Endangered Species Act, has the authority over endangered species. It also requires the States to do certain things, even though the Federal Government took their authority.

We think that this problem of Louisiana angry at the Fish and Wildlife Service, Fish and Wildlife Service angry at the State of Louisiana, or what have you, is not in the best interests of managing endangered species.

Anything that Congress can do in amending this act to permit, push, cajole, require these two governmental entities to get together and solve their problems in the best interests of the species involved, has to be helpful. Continuous turf battles over State and Federal authority is not getting us anywhere.

This act without question usurped some of the State's authority. They were justifiably angry at it. They have been put in a defensive position, they have been put in, actually, an antagonistic situation toward the Fish and Wildlife Service. The sooner we can get the expertise of both levels of government working on this, the sooner we are going to have a more decent endangered species program.

Mr. BREAUX. Take, for example, a new State which is totally irresponsible. This new State comes up with a management program for a resident species and says, "All right, we have a management

program; therefore, we should be allowed to harvest on it." If everybody would agree that the program looked shaky and was put together in a shabby manner, should not someone be able to review that State's management program and say, "Hey, look, this stinks, it is not any good, we are not going to accept it"?"

Mr. WILLIAMSON. Yes; that is why I am stressing consultation here, rather than the State to have a final say-so in whether or not a species should be listed.

Mr. BREAUX. You would not agree with the suggestion by some that if a State has a management program for a resident species, that that in itself should constitute a no-detriment finding?

Mr. WILLIAMSON. We do not agree with that.

Mr. BREAUX. OK, Dr. Crowe, you are a Commissioner of ICAC [International Convention Advisory Commission]. Do you as a Commissioner recommend that we legislatively should abolish it?

Mr. CROWE. As you observed, it is currently zero-funded, so it is functionally abolished. My tenure on that Commission, I believe, has expired. However, I am not sure. For what it is worth, I did function on that Commission for about 2 years and consider it very nearly the most useless thing I have ever done.

Mr. BREAUX. They probably could not afford to send you the termination notice.

Mr. CROWE. No; they did afford to do that, but I did not understand it.

Mr. BREAUX. Dr. Bertrand, you talked about the concern for the funding of the State's portion of the endangered species. I am wondering whether your State is able or willing to try and pick up the slack if Federal funds are cut back in this area as far as maintaining a State role in the endangered species program?

Do they consider it a checkoff like some 13 States have had to help fund their programs?

Dr. BERTRAND. I appreciate the question because it is one that is of real concern to us. We had a nongame funding bill checkoff all the way to the Governor's desk. After guarantees by the Governor the day before he would sign it, he vetoed it and took us all by surprise. We did not get a chance to lobby with him. We will go ahead and try to get that checkoff this year.

The State has applied for increased funding for endangered species this year, but with Federal budgets being cut back, we have shortfalls in the State of Massachusetts of over \$100 million that we know of immediately; for example, we have a State shortfall in Arts and Humanities of \$30 million. The pressures for social concerns to pick up those concerns which the Federal Government is dropping will not allow significant funds to State fish and wildlife programs.

The Massachusetts Audubon Society has a large wildlife budget—over \$2 million that we spend on wildlife work in the State of Massachusetts—more than what the State itself spends outside of the enforcement area. We will try to pick up some slack, but unless we get the contributions from the major trickle down—which has yet to happen—we won't be able to.

The other point I might mention, sir, is that I do worry about a State being given complete management authority because, as you know, State budgets change. We had proposition 2½ pass in Massa-

chusetts. The pressure on the State fish and wildlife budget was enormous. If they had a management plan which was accepted by the Federal Government and the authority turned over to the State, and the State were zero-funding internally, nothing would happen to benefit that species.

I think there is a real problem of trying to go ahead and work with 50 States, trying to treat them as identical entities when in fact we have 50 very different types of entities in our State system. The Federal Government should continue to have the authority over those programs and, wherever it is appropriate, go ahead and transfer authority to the States, because there are some States that do it very well.

The alligator recovery program in Louisiana is a classic example, but there were States very close to Louisiana doing nothing on alligators and the alligator was in fact in trouble in some of those. I do not think turning the authority back to the States really solves the long-term problem.

Mr. BREAUX. I understand what you are saying. It would be appropriate in the States which have a good plan but you are concerned some States, because of budgetary problems, might not have a reliable plan?

Dr. BERTRAND. Budgetary problems and emphasis within the State on their other priorities.

Mr. BREAUX. Can you give us a rough estimate on how much the State of Louisiana spent on the alligator program over the years?

Mr. NEWSOM. I do not have those figures at my fingertips right now, but Mr. Ensminger and Mr. Johannan in the back of the room might be able to provide those figures for you.

Mr. BREAUX. He is probably hiding out in the back.

Mr. NEWSOM. They are here.

Mr. BREAUX. Do you have a rough guess?

We are trying to figure out how much Louisiana has spent on alligator recovery.

Mr. ENSMINGER. We estimate since 1959 when we entered into our extensive alligator life history studies, we have spent somewhere between \$6 and \$8 million on the recovery and management of the American alligator in our State. And I would like to add, Mr. Chairman, Mr. Forsythe, that we have spent probably somewhere around \$700,000 on the reestablishment of our State bird, the brown pelican, in the same period of time.

Mr. BREAUX. Mr. Forsythe.

Mr. FORSYTHE. Thank you, Mr. Chairman. I thank the panel of the witnesses.

Dr. Bertrand, on this question of a States' determination or don't you think there might be some way that an assessment of a State plan could eliminate that State from the Federal mandate.

Dr. BERTRAND. It is a difficult issue, sir. If you did eliminate a particular State and allowed export after their no-detriment finding, you would still have the problem of enforcement against smuggling and other things between States.

I think there is room certainly for creative legislation here dealing with States as individuals.

Mr. FORSYTHE. In fact we did it with the alligator, didn't we?

Dr. BERTRAND. On the alligator it seems to work.

Mr. FORSYTHE. From what I read over the weekend, the alligator is now resident on the golf course at Hilton Head.

Dr. BERTRAND. We have some in Massachusetts sewers as well.

Mr. FORSYTHE. It seems to be in there because States who have done a job in this area know to add that layer of bureaucracy.

If we have less bureaucrats at the federal level, maybe you will get a buck.

Dr. BERTRAND. I would agree with you, sir.

Mr. FORSYTHE. With respect to the proliferation of the State lists of endangered species, does that worry you some?

Dr. BERTRAND. We have three layers; if you are talking about proliferation in terms of numbers of animals on the list, that is an inevitable consequence of world population growth and the change in habitat. If everything continues at present, the Council on Environmental Quality, the International Union for Conservation of Nature and Natural Resources, and the National Academy of Sciences have all determined we will lose somewhere between 10 and 20 percent of our fauna across the entire globe. We are talking about between 1 and 2 million species that will disappear. If in fact the lists had every species on them that deserves to be on them right now, the lists would be vastly bigger than they are. I think the lists are remarkable instruments of constraint in their present configuration.

We are losing species all over the Earth. Now I think that we need to have three layers of lists: The international lists with those species which deserve priority international attention, a national list which designates where we stand in terms of protecting species for the general public in the United States and looks beyond individual boundaries of States, and a State list, which can help raise awareness, and aid management within individual States.

Those are the only three lists that I know of that have real value, international, National, and State.

Mr. FORSYTHE. I refer to the volume of the list, not the number of lists.

Dr. BERTRAND. The volume of the lists is something over which there is little or no control unless we change the way the world is going. There are some species obviously that are on there that are questionable scientifically as to whether they belong but there are certainly many others that could be added that do not presently show up at all. Those are far greater in number than the ones that are incorrectly listed.

Mr. FORSYTHE. I thank you for your answer.

With respect to this bobcat decision I would like to touch several bases with you on this. It was Mr. Crowe who made some pretty broad and flat statements about that particular situation.

Am I on the wrong base, talking about coyotes, where some sixth or seventh of all the acreage that has this problem is in the State of South Dakota, do we have to look at that in a different way than we do on a national basis?

Mr. PEARSON. I am not exactly sure how you would look at it. Under the mechanism of the law, all I can say is it has created undue hardship on the farmer and ranchers in that area. And maybe, if the Department of Interior would come out and define the habitat, we could get along with the act. I could specifically say

some of our farmers and ranchers because of this act, and who have had the problems, have less interest in the Endangered Species Act than they should.

Prior to the act we had a number of blackfooted ferrets in South Dakota. Since the cancellation of 1080, we have not been able to find the blackfooted ferret in South Dakota.

So it is a working relationship between the other agencies that we are concerned with and how this affects South Dakota. I am sure it does affect some of our other States up there, such as Wyoming, also.

Mr. FORSYTHE. Let's go with the ferret problem in which you state there has not been one seen in the last 10 years in South Dakota.

Mr. PEARSON. Ten years.

Mr. FORSYTHE. Is that true in Wyoming, for instance?

Mr. CROWE. No, sir. We have blackfooted ferrets in Wyoming.

Mr. FORSYTHE. Is the population of ferrets surviving?

Mr. CROWE. We really are not sure. In fact, just recently has a population of blackfooted ferrets been identified in the State of Wyoming, within the last few months, as a matter of fact.

Our big problem right now is to keep the researchers from trampling them to death.

Mr. FORSYTHE. That is a problem that I have heard about before. The various species they are trying to look at appear to be victims to the scientists looking at them. But what is your response to the situation for instance in Idaho or in South Dakota; since you are doing all right in Wyoming?

Mr. CROWE. I understand and sympathize with South Dakota's problem. Now that we have found the population of blackfooted ferrets in the State of Wyoming, we will have to deal with the same problem; that is the designation of critical habitat for that species.

Our problem is somewhat different than that in South Dakota. Wyoming has considerable Federal land and in South Dakota they are dealing mainly with private land. However, in the specific instance where we have found a population of blackfooted ferrets, there is State, private, and Federal land. We will have to go through the Federal inner workings to get consideration for the maintenance of habitat that is on Federal land and we will have to coordinate with private landowners in order to get it done on private land.

Mr. FORSYTHE. Do any of you know, are there other species involved in the coyote problem as endangered species as the blackfooted ferret?

Mr. CROWE. I do not see a direct relationship between protection afforded the blackfooted ferret and the problem of predator control on coyotes, other than the use of predacides; 1080, as you may know, is used as a predacide and also used as a rodenticide to control rodent problems. There have been some problems since the Executive ban of the use of 1080 on Federal lands by President Nixon.

Mr. FORSYTHE. The ban on the use of 1080 is the thing that has increased the predator problem and it is all aimed at saving other species primarily.

Mr. CROWE. Yes; I do not think anybody is particularly concerned about the effects of 1080 on the coyote, rather the effects on nontarget species.

Mr. FORSYTHE. Right.

Mr. CROWE. And there are some problems to be dealt with in that arena; 1080 will indeed kill other species of wildlife.

I think one of the ways to approach that problem, as was pointed out by the gentleman from South Dakota, is if there is a definite definition of what is considered critical habitat for, in this case, the blackfooted ferret, then you have an area with which you can deal and you may be able to release some of the restrictions on the other areas.

Mr. FORSYTHE. Instead of saying it is all habitat, which apparently is the method that has been prevalent?

Mr. CROWE. I think that is what caused South Dakota their headache.

Mr. FORSYTHE. And other States?

Mr. CROWE. Yes.

Mr. FORSYTHE. Too often we get into legislation trying to write something and find out we push the button and something goes wrong someplace else. So I would tend to resist just trying this out in law, because if you have done it wrong you have more problems, although your message I think is very strong.

Mr. Huey, do you have a comment?

Mr. HUEY. Not on that particular subject, Mr. Forsythe. I did have a comment I wanted to make with respect to the international proposal regarding State involvement in the no-detriment finding.

The language that we have proposed would not give the State exclusive authority. It would give the States that authority unless it was demonstrated that they were not acting in a responsible manner and in that case the Secretary would have the responsibility of making that finding.

Mr. FORSYTHE. Do you agree with that, Mr. Williamson?

Mr. WILLIAMSON. Yes; we do.

Mr. FORSYTHE. There is Federal review in what you are asking for?

Mr. WILLIAMSON. Yes.

Mr. HUEY. Yes.

Mr. FORSYTHE. I think that is a very important point that I do not think came through quite clear.

Mr. BREAUX. Mr. Huey, would you cover that again?

Mr. HUEY. The proposal that the international has made would in effect give the States who have management authority over these appendix-listed species the recognition of their management program. If the situation indicates that the States are not acting in a responsible manner, then the Secretary would have the responsibility of making the no-detriment finding or for making a finding.

Mr. BREAUX. Unless the Secretary found that the State management program was an inadequate program, the State program would be accepted as a no-detriment finding.

Mr. HUEY. That is what we propose.

Mr. BREAUX. It would take affirmative action by the Secretary to say that this State program is no good in effect.

Mr. HUEY. That is correct. The language that would establish this mechanism is furnished in my testimony, Mr. Chairman.

Mr. BREAUX. Thank you.

Mr. Sunia.

Mr. SUNIA. No questions, thank you.

Mr. BREAUX. Mr. Huey, what would the Federal role be with regard to the authority of a State management program for a resident species? Are you envisioning that the program would be submitted to the Federal Government for review? How do you envision it operating?

Mr. HUEY. The language that has been developed to accomplish this mechanism, as I say, does not provide a formal review. It requires the question to be raised. Then the review would be conducted. It would not be a normal practice. The normal practice would be that the State would have management responsibility and that the judgment of those States would be accepted as a finding of no detriment.

If they permit the taking of that species, these States have statutory authority for the welfare of those species, it has been in existence for many years. I do not think it is possible to demonstrate very many situations where States have acted irresponsibly.

You would have to go back quite a few years to find a case where a State has not acted responsibly with respect to their statutory responsibility for wildlife protection and management.

Mr. BREAUX. All right. Now, I undersatnd what your recommendation is.

Mr. HUEY. If I may, Mr. Chairman, also I would like to point out to Mr. Bertrand that New Mexico was occupied and civilized when people in Massachusetts still depended on the Indians for their Thanksgiving dinner.

Mr. BREAUX. We are.

Dr. BERTRAND. Thank you, Mr. Huey.

Mr. BREAUX. We will let you continue those discussions at the recess during round 6.

Your statement, Mr. Huey, does not address some of the other concerns that will be addressed later on by these panel members.

Does the international, for example, support the listing of all species under section 4 of the act, or should we concentrate on the "higher forms" of animals?

Mr. HUEY. Mr. Chairman, we continue to support the current situation of listing all forms because I think most of the States participate in management on a total ecological basis. It is not possible to do that if you are only considering higher forms. There is a relationship that exists among all forms. I do not think it is possible to manage one without considering the others.

Mr. BREAUX. Does the international recommend any changes in section 7 of the act?

Mr. HUEY. We have no stated position, Mr. Chairman, with respect to changes in section 7.

Mr. BREAUX. Mr. Pearson, with regard to the conflict between the ferret and the prairie dog, has the State attempted to take this conflict to the three-member panel to have them look at it as set out by appeals process?

Mr. PEARSON. I am not exactly sure what three-member panel to which you are referring.

Mr. BREAU. Under the exemption process that we have in the act under section 7.

Mr. PEARSON. No, we have not. I was not aware of it.

Mr. BREAU. Is that a viable thing that you might consider in trying to resolve this conflict?

Mr. PEARSON. I would certainly look at any possible solution to the problems that we have there.

Mr. BREAU. Has the State been turned down for the registration of the 1080 chemical?

Mr. PEARSON. Yes, it has.

Mr. BREAU. So you have a conflict there. It looks like some of the provisions of the act would be applicable in trying to go before the three-member panel for an exemption. Do you have lawyers who have read the whole act?

Mr. PEARSON. I have not personally myself, however, I am not an attorney. Our game-fish people probably are more familiar with the act than I am. However, upon being turned down by a Federal agency it was just natural that the Feds were not going to offer us a solution to solving the problems.

Mr. BREAU. A number of members, including Congressman Bowen who is here with us this morning, worked to try to keep the act intact, yet provide some exemptions for irresolvable conflicts.

I have not looked at your problems for more than 5 minutes this morning, but it strikes me you have the type of conflict triggering the section 7 provisions of the act. Thus it would be allowed to be kicked up to a higher authority for review to determine whether there is an economic problem which is causing some very severe damage to your State.

I am somewhat disappointed to learn that no one has even pursued it.

Mr. PEARSON. To be truthful, I was not aware of the procedure that you had.

Mr. BREAU. It may not fit but somebody from the State, if it is that big a problem, ought to read the whole act and determine whether it might fit.

Mr. PEARSON. We will certainly follow up on it.

[The following was received for the record:]

U.S. DEPARTMENT OF THE INTERIOR,
FISH AND WILDLIFE SERVICE,
Washington, D.C., March 23, 1982.

HON. JOHN B. BREAU,

Chairman, House Subcommittee on Fisheries and Wildlife Conservation and the Environment, House of Representatives, Washington, D.C.

DEAR MR. BREAU: The subject of black-tailed prairie dog control in South Dakota with Compound 1080 was raised at the February 22 and March 8, 1982, Endangered Species Act hearings. The ensuing discussions left a somewhat unclear picture of the U.S. Fish and Wildlife Service's involvement in the proposed program. This letter should clarify our activities relative to the request for 1080 use.

On October 5, 1979, the South Dakota Department of Agriculture (SDDA) applied to the Environmental Protection Agency (EPA) for an emergency exemption from pesticide registration requirements so that they could use Compound 1080 for black-tailed prairie dog control in western South Dakota. Because of the need for additional information, EPA denied the request on March 24, 1980.

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On April 21, 1980, SDDA again applied for an emergency exemption and submitted additional information to substantiate their need. Upon receipt of this second request for exemption, EPA determined that a Section 7 endangered species consultation would be required. The consultation was requested on May 21, 1980. The Service responded with a biological opinion (copy enclosed) dated June 19, 1980. The opinion found that the proposed use of 1080 for black-tailed prairie dog control in western South Dakota was likely to jeopardize the continued existence of the black-footed ferret. The opinion also provided a reasonable and prudent alternative to the use of 1080, i.e., the use of zinc phosphide-treated oats. This use is currently registered and results in consistently high reductions of prairie dogs when proper pre-baiting techniques are used.

Field trials have shown that 2 percent zinc phosphide-treated oats is an effective and safe treatment for control of black-tailed prairie dogs, and thus a logical replacement for 1080. Four field trials at 15 black-tailed prairie-dog colonies in Montana, Colorado, and Nebraska resulted in consistently high reductions in prairie-dog activity (76 to 96 percent) when colonies were prebaited and the bait applied at the low rate of 4 grams per burrow.

On July 20, 1980, EPA sent a mailgram to SDDA which denied their exemption request. Two reasons for denial were listed: zinc phosphide was currently registered and believed to be effective for the use requested, and the use of 1080 for prairie dog control was likely to jeopardize the continued existence of the black-footed ferret.

Roger Pearson, Secretary, SDDA, testified before the House Subcommittee on Fisheries and Wildlife Conservation and the Environment on February 22, 1982. He stated that prairie dog control operations in South Dakota were being severely hampered because zinc phosphide was the only toxicant that could be used. He felt 1080 would provide them with a more effective tool, but that it was not available because of EPA's concerns over effects on the black-footed ferret. The Service's Animal Damage Control supervisor for the South Dakota Area Office met with Mr. Pearson on March 3, 1982, to discuss prairie dog control. It was generally agreed that control would be intensified with zinc phosphide and a recommendation would be made that research into additional more effective and less expensive toxicants should be accelerated. This might include the use of 1080 at significantly lower concentrations than used in the past.

I hope that this has answered your questions concerning the Service's role in SDDA's request for use of 1080 in western South Dakota. If additional clarification is necessary, please do not hesitate to contact us. We will be glad to help in any way we can.

Sincerely yours,

ROBERT A. JANTZEN, *Director.*

Enclosure.

STATE OF SOUTH DAKOTA,
June 19, 1980.

Mr. DOUGLAS D. CAMPT,
*Director, Registration Division (TS-767),
Environmental Protection Agency, Washington, D.C.*

DEAR MR. CAMPT: This is our biological opinion in response to your May 21, 1980, request for formal consultation on an emergency exemption request from the South Dakota Department of Agriculture (SDDA). The SDDA proposes to use sodium monofluoroacetate (Compound 1080) to control black-tailed prairie dogs (*Cynomys ludovicianus*) in 15 counties of western South Dakota. This biological opinion has been prepared pursuant to Section 7 of the Endangered Species Act, as amended, and the January 4, 1978, Interagency Cooperation Regulations (50 CFR 402, 43 FR 870).

Application for emergency exemption and use of Compound 1080 was made by SDDA to the U.S. Environmental Protection Agency (EPA) on October 5, 1979. This request was denied March 24, 1980, by EPA. EPA specified the need for additional information to substantiate the emergency exemption request. SDDA again applied for emergency exemption on April 21, 1980, with additional information to substantiate their request.

All future requests by EPA to initiate formal consultation in Region 6 should be addressed to the Regional Director.

BIOLOGICAL OPINION

It is our biological opinion that the use of sodium monofluoroacetate to control black-tailed prairie dogs as prescribed in SDDA's request of April 21, 1980, is likely to jeopardize the continued existence of the black-footed ferret (*Hustela nigripes*).

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PROJECT DESCRIPTION

SDDA plans to apply Compound 1080 to black-tailed prairie-dog colonies in 15 western South Dakota counties: Dewey, Ziebach, Haakon, Jackson, Washabaugh, Bennett, Shannon, Pennington, Meade, Custer, Fall River, Todd, Harding, Butte, and Perkins. The total acreage occupied by the black-tailed prairie dog in South Dakota is estimated to be in excess of 1,000,000 acres. SDDA proposes to treat 100,000 acres under this project. The duration of application will be from August 1, 1980, through March 31, 1981.

BASIS OF OPINION

The black-footed ferret is the only ferret native to North America. The original range of the species was widespread across the Great Plains from southern Canada to the West Texas plains, an area which included the State of South Dakota (Hall and Kelson, 1959). Cahalane (1954) mapped the distribution of the species and found South Dakota the focal area containing the largest number of observations recorded for his survey. Ferrets have been recorded in 21 counties west and 15 counties east of the Missouri River in South Dakota. There were more than 400 sightings of ferrets in South Dakota from 1889 to 1972, with 150 of these sightings recorded in counties in which 1080 use is proposed (Linder et al. 1972). The most recent confirmed ferret sighting was in Todd County in March of 1979 (Jobman, pers. comm.).

The original range of the ferret corresponds closely to that of the prairie dog (Hillman, 1980). Active prairie-dog colonies constitute the primary habitat of the black-footed ferret (Fetchar and Jones, 1953; Hillman, 1968; Henderson et al., 1969; Sheets et al., 1971; Linder et al., 1972). The prairie dogs and burrows in the colonies provide food, shelter, and a place to rear young for the ferret.

The black-footed ferret, apparently, was never abundant. Only a few sightings were recorded, and many early naturalists considered the ferret rare (Hillman, 1980). Prairie dogs, however, occurred in great numbers in the past. Seton (1928) reported there were once probably five billion black-tailed prairie dogs in North America. Intense prairie dog control has since reduced their numbers substantially and black-footed ferret numbers have undoubtedly declined simultaneously with this reduction and eradication of the prairie dog.

Based on evidence from previous studies on the effects of Compound 1080 on domestic ferrets, programs to control black-tailed prairie dogs with this compound run a clear risk of secondary poisoning to the black-footed ferret. Hillman et al., (1968) describes such secondary poisoning in an experiment with domestic ferrets. Prairie dogs poisoned with standard dose Compound-1080 bait were fed to domestic ferrets (*Mustela putorius*). The consequential deaths of the ferrets demonstrated that secondary poisoning can occur under experimental conditions. Their unpublished account of sequential recovery periods by domestic ferrets fed Compound 1080 indicated poor coordination, continuous seizures, aimless wandering between seizures, and an aversion to remain in dark hidden locations when placed there. Occurrences of these symptoms in the wild would abnormally expose a ferret to a number of sources of predation. We would expect exposure of 1080-poisoned prairie dogs to consumption by a black-footed ferret during an operational program to be somewhat less than would occur under experimental laboratory conditions, but the hazard of secondary poisoning definitely exists.

Marshall (1963) found the minimum lethal dosage of 1080 for domestic ferrets (*mustela putorius*) in New Zealand to be between 1 and 1.25 mg/kg. Atzert (1971) listed an LD₅₀¹ dosage of 1.41 mg/kg for the domestic ferret; he also listed the LD₅₀ for the marten (*Martes americana*) and mink (*Mustela vison*) as 1.0 mg/kg.

The LD₅₀ for 1080-treated prairie dogs are reported by various authors to range from 0.3 to 1.0 mg/kg. During control operations, prairie dogs do not necessarily eat only a minimum dose. At these levels, it could be possible for a ferret to consume a lethal dose.

The domestic dog, a canine, has demonstrated accumulative susceptibility from five daily doses of 0.025 mg/kg (Foss 1948). The potential for accumulative susceptibility for the black-footed ferret is not known, but is suspect.

Because of the possibility of secondary poisoning, we conclude the use of sodium monofluoroacetate (Compound 1080) for prairie-dog control in South Dakota is likely to jeopardize the continued existence of the black-footed ferret.

¹ The LD₅₀ (median lethal dosage) is a statistical estimate of the dosage that would be lethal to 50 percent of a population of a species.

REASONABLE AND PRUDENT ALTERNATIVES

A reasonable and prudent alternative to the use of Compound 1080 is zinc phosphide. This compound is currently registered for use in prairie-dog control, and secondary hazards to ferrets and other wildlife are minimal. Field trials have shown that 2 percent zinc phosphide-treated oats is an effective and safe treatment for control of black-tailed prairie dogs, and thus a logical replacement for 1080. Four field trials at 15 black-tailed prairie-dog colonies in Montana, Colorado, and Nebraska resulted in consistently high reductions in prairie-dog activity (76 to 96 percent) when colonies were prebaited and the bait applied at the low rate of 4 grams per burrow (Tietjen 1976). High comparative costs in the use of zinc phosphide may be reduced by current research on prebait application methods. The research is being conducted by the U.S. Fish and Wildlife Service, Denver Wildlife Research Center.

Thank you for your interest in endangered species.

Sincerely yours,

DON W. MINNICH, *Regional Director.*

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Mr. BREAUX. All right. Congressman Bowen, do you have any questions.

Mr. BOWEN. No, sir.

Mr. BREAUX. Thank you very much, all of you. We look forward to working with you as we develop legislation in this area. Thank you for your attention and your presentations.

Mr. HUEY. Thank you, Mr. Chairman.

Mr. BERTRAND. Thank you, Mr. Chairman.

Mr. BREAUX. We are going to take the next panel and we will have a break after that for a luncheon period.

The second panel deals with international issues. We welcome Steve Boynton, American Fur Resources Institute, Fur Takers of America; Don Hoyt, National Trappers Association; Randy Bowman, Wildlife Legislative Fund; Richard Jachowski, Chief, Office of Scientific Authority, U.S. Fish and Wildlife Service, and

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John Grandy, vice president, Wildlife and the Environment, Humane Society of the United States.

The committee will be pleased to have you in order so we can hear the presentation of the witnesses.

Have you all discussed the preference? Are you all on speaking terms or what is the makeup of this panel.

Mr. BOYNTON. With limited exceptions.

Mr. BREAUX. As the fish and wildlife officer, Mr. Jachowski, if you could give us your presentation we will proceed from that point.

STATEMENTS OF RICHARD JACHOWSKI, CHIEF, OFFICE OF SCIENTIFIC AUTHORITY, U.S. FISH AND WILDLIFE SERVICE; STEVE BOYNTON, AMERICAN FUR RESOURCES INSTITUTE, FUR TAKERS OF AMERICA; DON HOYT, NATIONAL TRAPPERS ASSOCIATION; RANDY BOWMAN, WILDLIFE LEGISLATIVE FUND, AND JOHN GRANDY, VICE PRESIDENT, WILDLIFE AND THE ENVIRONMENT HUMANE SOCIETY OF THE UNITED STATES

Mr. JACHOWSKI. Thank you, Mr. Chairman. It is a pleasure to give testimony to your committee today. The subject of my presentation is CITES.

CITES is a multinational treaty designed to regulate international trade in certain species of animals and plants so that it does not threaten their continued existence. The treaty establishes an obligation to control international trade through a system of permits issued by designated management authorities in each nation. The key to the treaty's effectiveness is that management authorities are to issue permits only upon the advice of designated scientific authorities. The vital role of scientific authorities is to determine if exports will not be detrimental to the survival of the species, and if imports, in the case of appendix I species, will be for purposes that are not detrimental to the survival of the species.

The United States was the first nation to ratify CITES, on January 14, 1974, and we were one of the first to implement this treaty after it entered into force on July 1, 1975. The Fish and Wildlife Service issued final regulations implementing the provisions of CITES in February 1977 under authority contained in the Endangered Species Act. The act designated the Secretary of the Interior as management authority for the United States and established a seven-member interagency committee as the scientific authority.

In 1979 the act was revised to transfer scientific authority responsibilities to Interior and to establish an independent seven-member International Convention Advisory Commission to make recommendations to Interior on scientific authority matters.

It must be recognized that CITES still has its problems. Some of these are international involving issues such as the inclusion of taxa above the species level to the CITES appendices. Others are internal, such as the deficiency of efforts to control trade in wild plants, particularly cacti, and to conserve them.

The relationship between the Federal Government and State governments in controlling exports of wildlife, and the criteria to be used by the Scientific Authority in advising on exports of bobcats are of particular concern to us. As the result of a lawsuit brought

against the Service by Defenders of Wildlife, Inc., the Court of Appeals for the District of Columbia Circuit ruled that bobcat exports should not be permitted under CITES unless the Service's findings were based on reliable estimates of the bobcat population and data showing the total number of bobcats to be killed, in each of the States involved.

Although the Service developed guidelines and issued findings in accordance with this ruling, the District Court for the District of Columbia recently held that these efforts did not satisfy the court of appeals ruling and prohibited the export of all bobcat pelts taken after July 1, 1981. The Service is now continuing its analysis of information to determine if we can comply with the court and allow a reasonable use of the resource represented by the bobcat.

I should note that on January 11, 1982, the Service published a notice in the Federal Register announcing the Service's decision to propose to the parties of CITES that they consider delisting the bobcat from appendix II on the grounds that it is inappropriately included.

The Service continues to actively implement CITES, and to seek solutions to the problems that arise. I believe that CITES is becoming increasingly effective in preventing overexploitation of species through international trade. We are pleased by signs of growing international cooperation in this endeavor, especially in the exchange of information and coordination of law enforcement efforts among nations.

Having presented this brief summary, I will be glad to answer questions about our responsibilities.

Mr. BREAUX. Thank you very much for the presentation.

I want to start with Mr. Boynton.

STATEMENT OF STEVE BOYNTON

Mr. BOYNTON. Thank you, Mr. Chairman.

My name is Stephen S. Boynton, Washington Counsel for the American Fur Resources Institute [AFRI]. I am also testifying here today on behalf of the Fur Takers of America [FTA].

We sincerely appreciate the opportunity to make a statement before you concerning proposed amendments to the Endangered Species Act. AFRI and FTA are composed of trappers and fur dealers throughout the United States who have had reason to become well-acquainted with this act, the regulations thereunder and judicial interpretation of its implementation. There are over half a million trappers in this Nation which produce between \$300 to \$400 million annually. The total fur trade is a billion-dollar business which is one of the few industries that enjoys a favorable balance of trade. The trappers and members of the fur industry support wildlife conservation and believe that through proper wildlife management our renewable resources can be utilized for the benefit of wildlife and man.

Both AFRI and FTA strongly supports the general concepts embodied in the Endangered Species Act. The major concern, however, is the manner that this act is implemented administratively and interpreted judicially. This concern, we believe, is basically the

issue before Congress. In short, it is not the intent that Congress has evidenced but the implementation of that intent.

In our judgment the implementation of the Endangered Species Act should always be based upon sound principles of wildlife management and not to be dependent upon the specious arguments of protectionalism, emotionalism, and hollow rhetoric. It is our belief that this act should not be influenced or administered in one fashion under one administration and in another manner in a different administration, particularly when the two extremes are sound wildlife management administration and protectionism.

We believe it is the duty of Congress to insure that such administration will be consistent and we would trust the committee approaches any changes in the act with this basic thought, as has been discussed here this morning.

One of the primary issues that has concerned the wildlife community is what has been referred to as the bobcat issue. Unfortunately, and acknowledged as error, the bobcat—*Lynx rufus*—lynx—*Lynx canadensis*—and river otter—*Lutra canadensis*—were listed on appendix II at the first meeting of the parties of the Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES]. The parties acted upon a recommendation from the United Kingdom concerning the bobcat and the lynx which stated:

All cats are potentially involved in fur trade, and the scale of this trade is such that all species must be considered vulnerable, few populations now remaining unaffected. All wild species (of cat except the domestic cat *Felix catus*) not in Appendix I should be on Appendix II, so that the scale of their occurrence in trade can be monitored.

Appendix II listed species are those species thought to be threatened with extinction, therefore require strict monitoring. Through the provisions of CITES, export of bobcat pelts from the United States could not take place unless the Scientific and the Management Authority determined that such export would not be detrimental to the survival of the species. Such an annual finding was made each year after passage of the CITES resolution.

In 1979 the Defenders of Wildlife, Inc., legally challenged the finding that the harvest of bobcats in that season and subsequent export would not be detrimental to the survival of the species.

Bobcat pelts are harvested in 33 States and the Navajo Nation. After a 5-day hearing on the injunction, the U.S. District Court for the District of Columbia held that exports could take place from 26 States and the Navajo Nation but then banned export in 5 States and portions of 2. All parties appealed.

I represented 11 trappers and fur dealers and the Fur Conservation Institute of America, which was supported by the American Fur Industry, who intervened in that action. The International Association of Fish and Wildlife Agencies also intervened.

On February 3, 1981, the court of appeals ruled that no bobcat export could take place until reliable population estimates were established and a determination made on the number of pelts taken. This court holding completely rejected all the testimony of expert wildlife professionals in the lower court concerning the method and means upon which harvests are established wherein population statistics are only one of the datum considered and, thereby, substitut-

ed its judicial opinion for professional wildlife management decisions.

First of all, no wildlife manager concurs that reliable population estimates should be the only or primary basis upon which a decision is made to have an annual harvest of any given species. Taken to its logical conclusion, the more numerous the species, the less likelihood that reliable population estimates can be obtained. It is not an idle speculation that various antihunting and antitrapping groups will attempt to utilize this decision to attempt to block annual harvests of various species. This is not an unfounded fear.

In 1981 there was a trapper education bill in the State of Oregon which trappers supported. The Defenders of Wildlife, Inc., through their lobbyists, were able to have an amendment added to that bill stating no trapping could take place in that State unless reliable population surveys were undertaken. Fortunately, the bill was defeated in committee but this effort certainly bodes ill of what attempts will be made to use the precedent of this court action.

Due to this legal nightmare, bobcat pelts from the 1981-82 harvest have been blocked.

The Fish and Wildlife Service published proposed regulations based on information provided them by the States that the harvest of 1981-82 season of bobcats would in no way be detrimental to the species and petitioned the court to remove the injunction. The Defenders of Wildlife challenged this position and the court held that the proposed regulations did not precisely follow the court of appeals guidelines. Consequently, no export can take place.

This circumstance will cost the trappers of this Nation approximately \$5 million. Since the Supreme Court denied the appeal, the relief that is necessary for the far-reaching adverse implications of this case is an appropriate amendment to the Endangered Species Act.

We urge that Congress consider legislation to remedy this position which includes language to make the relief retroactive to permit export of bobcat pelts taken in the 1981-82 season, as Dr. Jachowski mentioned.

The United States is attempting to seek a delisting on CITES based upon the fact that the populations are not threatened. It is our understanding that Canada will seek to delist the lynx and will so make a formal request at the fourth meeting of the parties of CITES in 1983. It has been further suggested that the river otter is in no way threatened but that it remains on appendix II for look-alike purposes to which we have no objection.

However, given these efforts on behalf of bobcat, river otter, and lynx, we hasten to point out that even if such delisting takes place, the far-reaching negative aspects of this case must be removed to permit the scientific principles of wildlife management to properly function.

The bobcat, river otter, and lynx saga, however, illustrates a situation that only can be corrected by Congress. In the future, however, we believe such a similar situation can be avoided. Although the United States is obligated by international agreement under CITES to have a scientific and management authority to determine the status of domestic species, the State governments are, in fact, the entities which have the information, scientific data, and admin-

istration of resident wildlife and fish. Consequently, we believe if it is determined that a particular species that is under a qualified State management program is not threatened or endangered, that determination must be accepted by the Federal Government.

Barring any abuse of discretion or arbitrary and capricious decisions, the Federal Government should be mandated to accept that position. Further, if a resolution is made at a CITES meeting to list such a domestic species differently than States have determined the status, the Federal Government should be bound to take a reservation.

Having attended two of the three meetings of the parties of CITES, it is my belief that CITES is maturing by treating the convention as an international trade convention rather than an endangered species convention. However, the United States should not be put in the position of having its quality of wildlife administration dictated to by others outside the United States. As already mentioned, however, the quality of our wildlife management efforts in the United States should not be dependent upon a particular administration. It should be the duty of Congress to insure that the administration of fish and wildlife in this country will always be based upon principles of wildlife management rather than emotion and rhetoric.

The U.S. Government must impress upon the executive branch of Government that this convention is one that should be based upon the goals and intent of the act and not leadership that changes with the administration or personnel. Only by maintaining the impartial standard of scientific data can reasonable commitments be made for the benefit of wild fauna, flora, and man.

Congressman Forsythe mentioned in earlier questioning about regulation that could take place. However, I would like to call to the attention of this committee a regulation that we feel is excessive and Congress should respond to.

I refer to the import-export license which requires that all persons or entities who engage in the export of wildlife must obtain a license, keep certain records, retain them for 5 years, and allows the Fish and Wildlife Service to inspect records and inventory.

Although an exception was granted when this regulation finally took effect in December 1981, exempting those persons and entities who do \$25,000 additional annually, or list the net effect for those not exempted is not to go through the redtape, face inspection jeopardy, and recordkeeping requirements. Rather, the trappers have sold directly rather than selling out of the country and taking less money for their pelts. This circumstance caused market disruption which is totally unnecessary.

The overwhelming position of wildlife managers throughout the country is, here is no sound basis for requiring such licensing and recordkeeping if it does not relate to a species that is endangered as far as CITES or listed on our endangered species list in the United States. Since none of the data derived has a useful application, practically all the regulations do is add another layer of bureaucratic paperwork for no valid purpose.

We do not believe, though we have been informed, that this legislation aids law enforcement. With a strengthened Lacey Act, the Black Bass Act, and other statutes administered by FWS, we can

see no reason for such a regulation other than import and export involving species listed under the Endangered Species Act or the appendixes of CITES. We sincerely hope your committee reviews this situation.

Mr. Chairman, we sincerely appreciate the opportunity to testify before you on these issues. We look forward to reviewing the specifics of legislation and pledge our cooperation in any way we may be of assistance to the committee and staff.

I will terminate my oral statement at this point and answer any questions.

Mr. BREAUX. Thank you.

[Statement of Mr. Boynton follows:]

STATEMENT OF STEPHEN S. BOYNTON ON BEHALF OF AMERICAN FUR RESOURCES
INSTITUTE AND FUR TAKERS OF AMERICA

Mr. Chairman, my name is Stephen S. Boynton, Washington Counsel for The American Fur Resources Institute (AFRI). I am also testifying here today on behalf of The Fur Takers of America (FTA). We sincerely appreciate the opportunity to make a statement before you concerning proposed amendments to the Endangered Species Act. AFRI and FTA are composed of trappers and fur dealers throughout the United States who have had reason to become well acquainted with this Act, the regulations thereunder and judicial interpretation of its implementation. There are over half a million trappers in this nation which produce between \$300-\$400 million annually. The total fur trade is a billion dollar business which is one of the few industries that enjoys a favorable balance of trade. The trappers and members of the fur industry support wildlife conservation and believe that through proper wildlife management our renewable resources can be utilized for the benefit of wildlife and man. Both AFRI and FTA strongly support the general concepts embodied in the Endangered Species Act. The major concern, however, is the manner that this Act is implemented administratively and interpreted judicially. This concern, we believe, is basically the issue before Congress. In short, it is not the intent that Congress has evidenced but the implementation of that intent.

In our judgment the implementation of the Endangered Species Act should always be based upon sound principles of wildlife management and not to be dependent upon the specious arguments of protectionalism, emotionalism and hollow rhetoric. It is our belief that this Act should not be influenced or administered in one fashion under one Administration and in another manner in a different Administration; particularly, when the two extremes are sound wildlife management administration and protectionism. We believe it is the duty of Congress to insure that such administration will be consistent and we would trust the Committee approaches any changes in the Act with this basic thought.

One of the primary issues that has concerned the wildlife community is what has been referred to as the "bobcat issue." Unfortunately, and acknowledged as error, the bobcat (*Lynx rufus*), lynx (*Lynx canadensis*) and river otter (*Lutra canadensis*) were listed on Appendix II at the First Meeting of the Parties of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). 27 U.S.T. 1087; T.I.A.S. No. 8249; ratified by U.S. Senate, 119 Cong. Rec. 28012 (Aug. 3, 1973). The Parties acted upon a recommendation from the United Kingdom concerning the bobcat and the lynx which stated, inter alia: "All cats are potentially involved in fur trade, and the scale of this trade is such that all species must be considered vulnerable, few populations now remaining unaffected. All wild species [of cat except the domestic cat (*Felix catus*)] not in Appendix I should be on Appendix II, so that the scale of their occurrence in trade can be monitored. Berne Meeting Doc. 1.5, Annex I, United Kingdom of Great Britain and Northern Ireland, Supporting Statement 1.2."

Appendix II listed species are those species thought to be threatened with extinction, therefore, require strict monitoring. Through the provisions of CITES, export of bobcat pelts from the United States could not take place unless the Scientific and the Management Authority determined that such export would not be detrimental to the survival of the species. Such an annual finding was made each year after passage of the CITES resolution.

In 1979 the Defenders of Wildlife, Inc., legally challenged the finding that the harvest of bobcats in that season and subsequent export would not be detrimental to

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the survival of the species. *Defenders of Wildlife, Inc., v. Endangered Species Scientific Authority et al.*, U.S. Dist. Ct. for the District of Columbia, Civil Action No. 79-3060 (1979).

Bobcat pelts are harvested in thirty three (33) states and the Navajo Nation. After a five (5) day hearing on the injunction the United States District Court for the District of Columbia held that exports could take place from twenty six (26) states and the Navajo Nation but then banned export in five (5) states and portions of two (2). I represented eleven trappers and fur dealers and the Fur Conservation Institute of America, which was supported by The American Fur Industry, who intervened in that action. The International Association of Fish and Wildlife Agencies also intervened. The case was appealed to the United States District Court for the District of Columbia by both plaintiff and defendants. The case was orally argued on June 13, 1980. On February 3, 1981, the Court of Appeals ruled that no bobcat export could take place until "reliable population estimates" were established and a determination made on the number of pelts taken. *Defenders of Wildlife, Inc., v. Endangered Species Scientific No. 79-1512* (Feb. 3, 1981). This Court holding completely rejected all the testimony of expert wildlife professionals in the lower court concerning the method and means upon which harvests are established wherein population statistics are only one of the datum considered and, thereby, substituted its judicial opinion for professional wildlife management decisions.

The implications of this decision unfortunately go far beyond the bobcat issue. First of all, no professional wildlife manager concurs that "reliable population estimates" should be the only or primary basis upon which a decision is made to have an annual harvest of any given species. Taken to its logical conclusion, the more numerous the species, the less likelihood that "reliable" population estimates can be obtained. Two examples come to mind. First, in most states there is the rabbit season. To establish a reliable population estimate as to the number of rabbits would be virtually impossible. Another example would be the mourning dove where population estimates would be mere "guesstimates." However, both of these species are under management programs of the state which embodies sound principles of wildlife administration. It is not an idle speculation that various anti-hunting and anti-trapping groups will attempt to utilize this decision to attempt to block annual harvests of various species. This is not an unfounded fear. In 1981, there was a trapper education bill in the state of Oregon which trappers supported. The Defenders of Wildlife, Inc., through their lobbyists, were able to have an amendment added to that bill stating no trapping could take place in that state unless reliable population "surveys" were undertaken. Fortunately, the bill was defeated in Committee but this effort certainly bodes ill of what attempts will be made to use the precedent of this court action.

Due to this legal nightmare, bobcat pelts from the 1981-1982 harvest have been blocked. The Fish and Wildlife Service published proposed regulations based on information provided them by the states that the harvest of 1981-1982 season of bobcats would in no way be detrimental to the species and petitioned the Court to remove the injunction. 46 Fed. Reg. 28192 (May 26, 1981); 46 Fed. Reg. 45172 (Sept. 10, 1981) 46 Fed. Reg. 50774 (Oct. 14, 1981). The Defenders of Wildlife challenged this position and, the Court held that the proposed regulations did not precisely follow the Court of Appeals guidelines. Consequently, no export can take place. This circumstance will cost the trappers of this nation approximately \$5 million. Since the Supreme Court denied the appeal, the relief that is necessary for the far reaching adverse implications of this case is an appropriate amendment to the Endangered Species Act.

Clearly, there is a distinct possibility of a challenge to no-detriment findings for river otter and lynx. Courts may be requested to apply the requirement that wildlife management decisions under the Endangered Species Act include the decisions to add a species to the threatened or endangered species list under Section 4 and the requirement that all Federal agencies "insure that their action will not jeopardize the continued existence of any" species.¹ 16 U.S.C. §§ 1533, 1536(a). We urge that Congress consider legislation to remedy this position which includes language to make the relief retroactive to permit export of bobcat pelts taken in the 1981-82 season.

The United States is attempting to seek a delisting on CITES based upon the fact that the populations are not threatened. It is our understanding that Canada will seek to delist the lynx and will so make a formal request at the Fourth Meeting of the Parties of CITES in 1983. It has been further suggested that the river otter is in

¹ The Migratory Bird Treaty Act is also affected by this Court Decision and Section 3 would need to be amended. 16 U.S.C. § 704.

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no way threatened but that it remains on Appendix II for look alike purposes to which we have no objection.

However, given these efforts on behalf of bobcat, river otter and lynx, we hasten to point out that even if such delisting takes place the far reaching negative aspects of this case must be removed to permit the scientific principles of wildlife management to properly function.

The bobcat, river otter and lynx saga, however, illustrates a situation that can only be corrected by Congress. In the future, however, we believe such a similar situation can be avoided. Although the United States is obligated by international agreement under CITES to have a Scientific and Management Authority to determine the status of domestic species, the state governments, are, in fact, the entities which have the information, scientific data, and administration of resident wildlife and fish. Consequently, we believe if it is determined that a particular species that is under a qualified state management program is not threatened or endangered that determination must be accepted by the Federal Government. Barring any abuse of discretion or arbitrary and capricious decisions, the Federal Government should be mandated to accept that position. Further, if a resolution is made at a CITES meeting to list such a domestic species differently than states have determined its status, the Federal Government should be bound to take a reservation.

Having attended two of the three Meetings of the Parties of CITES, it is my belief that CITES is maturing by treating the Convention as an international trade convention rather than an endangered species convention. However, the United States should not be put in the position of having its quality of wildlife administration dictated to by others outside the United States. As already mentioned, however, the quality of our wildlife management efforts in the United States should not be dependent upon a particular Administration. It should be the duty of Congress to ensure that the administration of fish and wildlife in this country will always be based upon principles of wildlife management rather than emotion and rhetoric.

Presently, there are seventy-four (74) nations that are members of CITES. The United States must impress upon the Executive branch of government that this Convention is one that should be based upon the goals and intent of the Act and not leadership that changes with the Administration or personnel. Only by maintaining the impartial standard of scientific data can reasonable commitments be made for the benefit of wild fauna, flora and man.

As an example of over regulation under the Endangered Species Act, I would call attention to a regulation that has not only caused excessive and unnecessary paper work, but has financially hurt the trapper. I refer to the Import/Export License which requires that all persons or entities who engage in the export or import of wildlife must obtain a fifty dollar (\$50.00) license fee; keep certain records and retain them for five (5) years; allow FWS to inspect records and inventories and file certain reports. See 29 Fed. Reg. 8357 (March 5, 1974); 43 Fed. Reg. 12830 (March 27, 1978); Fed. Reg. 86496 (Dec. 31, 1980); 50 CFR, Subpart 14. Although an exception was granted if the value of wildlife imported or exported annually is less than twenty five thousand dollars (\$25,000.00), the net effect for those not exempted is not to go through the red tape, face inspection jeopardy and record keeping requirements. Rather, they have sold directly taking less money for their pelts. This circumstance has caused market disruption which is totally unnecessary.

The overwhelming position of the wildlife managers throughout the country is that there is no sound basis for requiring licensing and record keeping on wildlife if it is not on the Endangered Species Act nor listed in the Appendices of CITES since none of the statistical data derived has a useful application. Practically, all the regulations do is add another layer of bureaucratic paperwork for no valid purpose—requiring costly, burdensome and unnecessary work for private enterprise, as well as, the Federal Government.

Nor do we believe this regulation in any fashion aids law enforcement. With a strengthened Lacey Act [18 U.S.C. § 43-44], the Black Bass Act [16 U.S.C. § 1382] and other statutes administered by FWS, we can see no reason for such a regulation other than import and export involving species listed under the Endangered Species Act or the Appendices of CITES. We sincerely hope your committee reviews this situation.

In 1979 Congress amended the Endangered Species Act to eliminate the Endangered Species Scientific Authority (ESSA) and replace it with an International Convention Advisory Commission (ICAC). 16 U.S.C. § 1537 (b)-(c) (Supp. III, 1979). Although we believe that this step was a positive one, it is our feeling that such an outside advisory body such as ESSA or, an internal body such as ICAC, is not necessary. Rather, that any monies that would be directed for such an operation be included for the Office of Endangered Species within the Department of the Interior.

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As a practical matter, ICAC has ceased to exist since it is now unfunded but Congress should express its opinion by fully abolishing such a body and putting any such international obligation implementation through the Office of Endangered Species.

We also believe that Congress ought to review the question of experimental populations. The effort to improve conservation of endangered and threatened species, subspecies and populations with the establishment of population in addition to those already occurring naturally in the wild is laudable. However, in some cases the establishment of these populations has occurred in areas where such populations never have been in history. With their introduction suddenly these areas become critical habitats. The classic example is the whooping crane. Consequently, we even question whether critical habitat should be designated for such experimental populations. Further, a scheme should be designed where valid objections to the establishment of such an experimental population which includes biological, economic and related areas of concern can be implemented and honored. This mechanism should be especially recognized where states would object to the introduction of such an experimental population on lands over which the Federal Government has jurisdiction where there can be some assurance of that experimental population will be confined to some jurisdictions.

We are aware that there has been concern over the definition of critical habitat. We believe that this concept needs to be carefully reviewed along with consideration of other categories in addition to "endangered" and "threatened", such as "experimental", "candidate" and "sensitive." We believe that there should be a review of the definition of "species" especially as it relates to subspecies, populations and captive-bred wildlife.

Courts have had to constantly struggle with certain definitions under the Act and interpret policy as intended by Congress. In the Tellico Dam case Congress reviewed language and determined that "beyond doubt . . . Congress intended endangered species to be afforded the highest priorities" and "the plain intent of Congress in exacting this statute was to halt and reverse the trends toward species extinction, whatever the cost." *TVA v. Hill*, 437 U.S. 173 (1978). There are such phrases as "to the extent practicable" * * * [16 U.S.C. § 1531(4)]; "to the maximum extent prudent. * * *" [16 U.S.C. § 1533(f)(4)]. It would appear that such phrases can be used to eliminate wildlife management practices by unilateral decisions to achieve the "maximum." Clearly, wildlife management judgment is the key to the administration of this Act. Consequently, it is suggested that such phrases be modified "to the extent necessary" or "to the extent practicable" realizing that there are scientific and commercial considerations to be considered as the 1979 amendment recognized.

We further believe that there must be strict adherence to scientific data before listing endangered or threatened species. Although the Act speaks to the "best scientific and commercial data" available before listing takes place, all too often species have been listed without sufficient information. 16 U.S.C. § 1533(b)(1). To "err on the side of the species" is intellectually dishonest and does not, we believe, reflect the intent of Congress. Very often the proposed list of species does have a constituency and it is listed without objection. The famous case of the Illinois Mud Turtle (*Kinosteron flavescens spooneri*) is not a rare exception. When the Office of Endangered Species attempted to list the Illinois Mud Turtle as an endangered species it became necessary for the Monsanto Company to spend considerable time, money and effort to prove that it was not an endangered species and such an indictment was underscored by no less than a panel from the National Academy of Sciences. Congress obviously intends the Federal Government to have that responsibility but it should discharge it in a professional manner.

One area that we feel should be reviewed carefully in considering the practical implementation of the Endangered Species Act is the question of economic impact of decisions. Since listing is a discretionary decision based upon submitted scientific and commercial data, we feel that the economic considerations of such a listing in terms of practicality should definitely be considered. Clearly, such input has never really considered this factor. We are not suggesting that it should be controlling, but believe it definitely should be part of the list of decision making criteria.

We are also troubled by the "jeopardy" standard contained in Section 7 of the Act. 16 U.S.C. § 1536 (Supp. III, 1979). Although the amendments in 1979 changed the language from "do not jeopardize the continued existence . . . of endangered and threatened species or result in the destruction or modification of habitat of such species . . ." to "not likely to jeopardize . . .", there is some major question that any real change has been made in practical administration. We believe that a modification would be in order to state that consultation by Federal agencies shall insure "in so far as practical" that any action is not likely to jeopardize.

Mr. Chairman, we sincerely appreciate the opportunity to testify before you on these issues. We look forward to reviewing the specifics of legislation and pledge our cooperation in any way we may be of assistance to the Committee and staff.

Mr. BREAU. Mr. Don Hoyt.

STATEMENT OF DON HOYT

Mr. HOYT. Mr. Chairman, subcommittee members, my name is Don Hoyt. I represent the National Trappers Association.

Scientific wildlife management as practiced by State fish and game departments nationwide is one of the great success stories of the 20th century. In spite of the encroachment of civilization, many species are more abundant today than they were 50 years ago. Those fine biologists who man our State fish and game agencies have graduated from our best universities and possess the best brains in the world in the field of wildlife management. Collectively, they have hundreds of years experience in the field of wildlife management.

Here today to contradict those believing in sane and reasonable wildlife management are the protectionist organizations. There is nothing in their background that would suggest that they are qualified to do so. Their theories and philosophies are based on emotion, and emotion alone.

The National Trappers Association strongly supports States rights to manage their own wildlife resources, and firmly believes in their ability to do so wisely.

In conclusion I ask you to keep one thing in mind, conservation means wise use. It does not mean nonuse. In keeping with the wise-use context, I respectfully request that you support legislation to correct the negative bobcat decision in the D.C. courts.

Thank you for listening.

Mr. BREAU. Thank you, Mr. Hoyt.

Mr. BREAU. Next we will hear from Mr. Randy Bowman.

STATEMENT OF RANDY BOWMAN

Mr. BOWMAN. Thank you, Mr. Chairman.

My name is Randy Bowman, director of Federal relations for the Wildlife Legislative Fund of America.

The Wildlife Legislative Fund is suggesting a number of changes in the Endangered Species Act which we believe will strengthen the credibility of the act and improve its effectiveness. These proposals have widespread support among sportsmen and wildlife managers, as evidenced by the editorial support of two of the largest sportsmen-oriented publications, Field and Stream, and Outdoor Life.

Before I summarize these proposals, however, I would like to briefly address the role of sportsmen in the conservation community, for it is often overlooked. Sportsmen, the original conservationists, still provide the lion's share of the funds which are used for most wildlife and habitat protection programs.

A 1980 study by our organization found that hunting and fishing license fees raise over \$418 million yearly for conservation programs. The Pittman-Robertson Act has resulted in over \$1 billion being distributed to the States for wildlife programs. The total of all these and others is \$3.6 billion over the past 4 decades.

These sources of funds currently constitute better than 90 percent of revenues of the State fish and game departments. Nor do sportsmen stop there. A number of sportsmen's groups are actively working to protect habitat and otherwise enhance the survival of various species.

Perhaps the largest of these groups is Ducks Unlimited, a contributor to the Wildlife Legislative Fund. Recent testimony by Ducks Unlimited before this subcommittee gave an indication of the extent of these activities. Ducks Unlimited has expended to date over \$100 million in protecting over 3 million acres of wetlands. Their current budget calls for expenditure of a quarter of a billion dollars, \$1 million a week, for habitat protection in Canada, the United States, and Mexico over the next 4 years.

Other sportsmen's organizations throughout the United States contribute additional millions of dollars annually to the improvement and management of wildlife and wildlife habitat.

The Wildlife Legislative Fund, along with all other sportsmen's groups, supports the Endangered Species Act. Our interest is in maintaining the act, and in improving its credibility. There unfortunately have been a number of actions in the area of protecting allegedly endangered species which in our judgment have damaged the credibility of the various endangered species programs.

Probably the most damaging of all as far as sportsmen are concerned is the specific listing in the Endangered Species Act of sport hunting as a cause of endangerment. We urge that this language be deleted, inasmuch as it is simply untrue for domestic species under modern wildlife management practices. Loss of habitat, not hunting, is the cause of endangerment.

Although this may seem a trivial matter, I can assure the committee it is not. Sportsmen are well aware, and proud of, the role they play in supporting our wildlife programs. They bitterly resent accusations to the contrary. Continued listing of sport hunting as a cause of endangerment can only detract from sportsmen's support for endangered species programs, at a time when that support is greatly needed.

We strongly urge that the court decision in *Defenders of Wildlife v. Endangered Species Scientific Authority* be overturned. This decision, which required reliable estimates of population in order to permit the taking of bobcats for export, threatens the entire structure of wildlife management. The court has substituted its opinion for the scientific judgment of professional wildlife managers. If allowed to stand, it creates a precedent which can be used to attack all hunting and fishing.

We propose that if any State with management authority over a species objects to a listing or delisting of the species, or to any regulation dealing with the species, and the Secretary does not concur with the State position, he would be required to justify his decision in writing.

We feel this would be a major step toward achieving in concrete form the consultations and better cooperative attitudes between the State and Federal authorities that have been previously discussed.

We propose that the act be amended to insure that sport hunting trophies, which are legally taken at the country of origin and may

be legally possessed at their destination, and which are passing through the United States without any attempt to clear them through customs, will not be confiscated by the Fish and Wildlife Service. The Service has revised its regulations to prohibit this practice, and we suggest that this policy be incorporated into the law.

We also strongly support the proposals of the International Association of Fish and Wildlife Agencies, with respect to experimental populations, the abolishment of the International Convention Advisory Commission, the guarantee of funding for cooperative programs, and the establishment of procedures for dealing with unjustified CITES listings.

We have previously submitted draft language to the committee staff for the proposals I have discussed. We look forward to working with the committee and with other interested parties to achieve solutions to these problems.

Mr. Chairman, I appreciate the opportunity to testify and welcome any questions the committee may have.

[Statement of Mr. Bowman follows:]

STATEMENT OF RANDAL R. BOWMAN, DIRECTOR OF FEDERAL RELATIONS, WILDLIFE
LEGISLATIVE FUND OF AMERICA

Mr. Chairman, I am Randal Bowman, Director of Federal Relations for the Wildlife Legislative Fund of America. The WLFA is a non-profit corporation formed specifically to defend sportsmen and scientific wildlife management practices against legislative and legal actions brought by those who attempt to outlaw hunting, trapping, and fishing, and those who try to destroy wildlife management as we know it in the United States today.

We provide legal defense, lobbying, research and public education services in pursuit of our purposes. We work in every state in the Union as well as in Washington. The WLFA is headquartered in Columbus, Ohio.

We began discussing the Endangered Species Act with a number of organizations last summer, with a view towards developing improvements in the Act. A series of initial recommendations were developed, and circulated to many sportsmen's groups around the country. Discussions were also held with groups operating here in Washington which had not been involved in the initial meetings. All of the comments we received were taken into account, and the proposals modified accordingly.

We are here today to suggest a number of changes in the Endangered Species Act which we believe will strengthen the credibility of the Act and improve its effectiveness. These proposals largely revolve around strengthening the role of the States in the decision-making process, and in correcting some specific problems which have arisen under the Act, and under implementation of the CITES treaty.

Before I summarize these proposals, however, I would like to briefly address the role of sportsmen in conservation and wildlife management. There are a growing number of organizations which are involved in environmental and conservation issues, organizations which speak from a wide spectrum of viewpoints. Because of this, it is sometimes easy to lose sight of the role of the sportsmen in the conservation movement.

All of the organizations, including those representing sportsmen, lobby for legislation that reflects their view of how best to protect the environment and our wildlife and other resources. All attempt to educate the public, and all from time to time end up suing the government to insure that programs are carried on in the manner they believe best.

In most cases, however, the effort stops there. This is particularly true of those groups which so emotionally condemn hunters and hunting. I would just like to remind the Committee that for sportsmen, these legislative, legal and educational efforts are merely the beginning of their conservation activities. They also provide this one ingredient without which all of the activities of all the groups you will be hearing from would be meaningless—and that ingredient is money.

Simply stated, sportsmen provide the lion's share of the funds which are used for virtually all of the wildlife and habitat protection programs. A 1980 study by our organization found that hunting and fishing license fees—paid by sportsmen—raise

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over \$418 million yearly for conservation programs. The Pittman-Robertson Act, the primary source of federal assistance to state wildlife agencies, is financed solely by an excise tax on hunting equipment—a tax strongly supported by sportsmen's organizations. Since its inception in 1937, the Pittman-Robertson Act has resulted in over a billion dollars being distributed to the States for wildlife programs. The Dingell-Johnson Act, a similar program for sport fishing, is contributing over \$33 million per year—money again paid by sportsmen. The total is \$3.6 billion over the past four decades.

I would further note that these sources of funds constitute better than 90 percent of revenues of the State fish and game departments.

Nor do sportsmen stop there. A number of sportsmen's groups are actively working to protect habitat and otherwise enhance the survival of various species.

I am very pleased to point out that perhaps the largest of these groups, Ducks Unlimited, is a contributor to the Wildlife Legislative Fund, and recent testimony by DU before this subcommittee gave an indication of the extent of their activities.

There is no need to review the entirety of the testimony, but a brief summary might be helpful. DU has expended to date over \$100 million in protecting over 3 million acres of wetlands in Canada. These are home to over 300 species of wildlife, including endangered species such as the whooping crane. Their current firm budget calls for expenditure of a quarter of a billion dollars—a million dollars a week—for habitat protection in Canada, the United States, and Mexico over the next four years.

Other sportsmen's organizations throughout the United States contribute millions of dollars annually to the improvement and management of wildlife and wildlife habitat.

Finally, I would point out that while these programs are aimed primarily at game animals, all species benefit from habitat protection programs. For example, during the recent midwestern drought, over 75 percent of the prairie wetlands in Canada went dry—while over 75 percent of the lands protected by DU retained their water, to the great benefit of all wildlife.

I believe it would be fair to say that if it were not for the efforts and money of sportsmen, there would be severely reduced wildlife populations for us to attempt to protect.

I have digressed somewhat because I believe it is important to establish the role sportsmen play in conservation—particularly at a time when emotional attacks on hunters and hunting are increasing, and when false claims are made that hunting is a cause of endangerment of species.

The Wildlife Legislative Fund, along with all other sportsmen's groups, supports the Endangered Species Act. Our interest is in maintaining the Act, and in improving its credibility. There unfortunately have been a number of actions in the area of protecting allegedly endangered species—not all of which were under the authority of the Endangered Species Act—which in our judgment have damaged the credibility of the various endangered species programs. Examples include the ban on importation of leopard trophies from East Africa and the CITES listing of bobcats and other species not in need of protection.

Probably the most damaging of all as far as sportsmen are concerned is the specific listing in the Endangered Species Act of sport hunting as a cause of endangerment.

Accordingly, we are proposing a series of changes in the Act. As I had mentioned, their primary focus is to enhance the role of the States in the decision-making process. The federal government does not have management authority over most species, nor does it have sufficient resources to assume management. Yet we have heard repeated complaints from the states that their input has been ignored by the Department of the Interior.

We accordingly propose that if any state with management authority over a species objects to a listing or delisting of the species, or to any regulation dealing with the species, and the Secretary does not concur with the State position, he would be required to justify his decision in writing. The written justification would have to substantively address all of the points raised by the state.

We urge that the language in the Act which lists sport hunting as a cause of endangerment of species be deleted, inasmuch as it is simply untrue for domestic species under modern wildlife management practices. Loss of habitat, not hunting, is the cause of endangerment. In the event that unregulated hunting in a foreign country might endanger a species, language in the law covering "other natural or man-made factors affecting its existence" would permit it to be added to the list.

Although this may seem a trivial matter, I can assure the Committee it is not. Sportsmen are well aware, and proud of, the role they play in supporting our wild-

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life programs. They bitterly resent accusations to the contrary. Continued listing of sport hunting as a cause of endangerment can only detract from sportsmen's support for endangered species programs, at a time when that support is greatly needed.

We strongly urge that the court decision in *Defenders of Wildlife v. Endangered Species Scientific Authority* be overturned. This decision, which required "reliable estimates of population" in order to permit the taking of bobcats for export, threatens the entire structure of wildlife management. The court has substituted its opinion for the scientific judgment of professional wildlife managers. If allowed to stand, it creates a precedent which can be used to attack all hunting and fishing, of any species.

As reasonable as a requirement for reliable estimates of wildlife populations in conjunction with the establishment of a hunting season might seem to the layman, the fact is that population estimates are rarely used in modern wildlife management, and there are few biologists which would contend that they are necessary or even useful. Wild animal population levels are cyclical, and population trend data is used to establish seasons and bag limits. The technical explanations for this are lengthy, but the simple fact is, the system works. Populations of game species are generally increasing as a result of modern wildlife management practices.

Requirements for reliable estimates of populations will at best result in the diversion of thousands of scarce wildlife management dollars into the accumulation of useless data; at worst, it will effectively halt the hunting of any species for which its use is required.

We propose that the Act be amended to insure that non-commercial items, such as sport hunting trophies, which are legally taken at the country of origin and may be legally possessed at their destination, and which are passing through the United States without any attempt to clear them through customs, will not be confiscated by the Fish and Wildlife Service. The Service has revised its regulations to this effect, and we suggest that this policy be incorporated into the law.

We also strongly support the proposals of the International Association of Fish and Wildlife Agencies, and other groups, with respect to experimental populations, the abolishment of the International Convention Advisory Commission, the guarantee of funding for cooperative programs, and the establishment of procedures for solicitation of information on species proposed for listing under CITES and requirements for reservation in the event of unjustified listings.

We are aware of serious opposition to the latter two items from the Administration, but we do not believe that detracts from the validity of the concerns underlying the proposals. Unjustified listings by CITES can only detract from the credibility of the treaty, while the elimination of funds for endangered species programs largely undertaken as a result of federal initiative, even on a temporary basis, damages the federal-state relationships underlying the entire concept of endangered species protection.

It may well be that a different approach could be taken to achieve the desired results, but some action is clearly indicated in both areas.

These proposals have widespread support among sportsmen and wildlife managers, as evidenced by the editorial support of two of the largest sportsmen-oriented publications, *Field and Stream* and *Outdoor Life*.

We have previously submitted draft language to the Committee staff for the proposals I have discussed. We look forward to working with the Committee and with other interested parties to achieve solutions to these problems.

I am attaching a more detailed explanation of our proposals to my testimony.

Mr. Chairman, I appreciate the opportunity to testify, and welcome any questions the Committee may have.

Mr. BREAUX. Next we have Mr. John Grandy, vice president, Wildlife and the Environment.

Mr. Grandy.

STATEMENT OF JOHN W. GRANDY

Mr. GRANDY. Thank you, Mr. Chairman.

My name is Dr. John Grandy, I am vice president for wildlife and environment at the Humane Society of the United States, and am president of Monitor, Inc., the consortium of animal welfare, environmental, and conservation groups.

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I hold a Ph. D. degree in wildlife ecology and management from the University of Massachusetts. I have been employed by the U.S. Fish and Wildlife Service, U.S. Forest Service, Virginia Commission of Game and Inland Fisheries, and the National Parks and Conservation Association. In 1972 and 1973, during my employment with the National Parks and Conservation Association, I was intimately involved in formulating and negotiating the treaty now known as the Convention on International Trade in Endangered Species of Wild Fauna and Flora—hereinafter CITES.

In addition, I worked with CITES and the Endangered Species Act when I was employed by the President's Council on Environmental Quality in 1974 and 1975. In 1977, I was a member of the U.S. delegation to the special working group meeting of CITES parties held in Geneva, Switzerland.

Subsequently, as executive vice president of Defenders of Wildlife from 1975 to 1981, I formulated and guided the bobcat litigation under CITES, the results of which provide much of the subject matter being discussed at these hearings. I am presenting this statement today on behalf of Defenders of Wildlife, since I headed Defenders at the time the suit was begun, since I have substantial expertise with respect to the issue, and since the suit is, after all, an action brought solely by Defenders of Wildlife.

I will skip through my statement if that is all right with you.

Mr. BREAUX. That is fine.

Mr. GRANDY. I appreciate the opportunity to testify today on behalf of the 260,000 members and constituents of the Humane Society of the United States, Defenders of Wildlife, and the National Parks and Conservation Association. At the outset, we wish to stress that these organizations strongly support the Endangered Species Act of 1973 and reauthorization of the act without weakening amendments.

Our view on issues other than the bobcat issue will presumably be addressed in the testimony of M. Bean and K. Berlin before this subcommittee on March 8, 1982, on behalf of many conservation organizations, including Defenders of Wildlife, the Humane Society of the United States, and the National Parks and Conservation Association. Consequently, we will limit our remarks herein to the controversial bobcat issue.

In addition, we attach for the record a letter from our counsel, Covington & Burling, providing its legal opinion of any attempt to modify CITES or the court of appeals decision through amendment of the Endangered Species Act.

Initially, we regret the image which the numerous witnesses opposing bobcat protection and CITES tend to present. Indeed, with the volume of testimony being delivered in opposition to CITES protection for the bobcat, one might think this protection a travesty. Nothing could be further from the truth.

Bobcat protection, as our remarks will demonstrate, is appropriate and mandated. The opposition to this protection is generated by a combination of the economics of fur trapping, and fish and game agency funding, which is served by continued overexploitation of the bobcat rather than U.S. compliance with its international commitments. For these reasons and others which follow, it is our view that this committee should reject any amendments to the Endan-

gered Species Act which would decrease protection for the American bobcat or undermine the CITES treaty, and instead strongly support both bobcat protection and CITES.

First, a little background on how the bobcat came to be listed. In order to control international trade threatening wildlife and plant species, the Convention on International Trade in Endangered Species of Wild Flora and Fauna [CITES] was negotiated in Washington, D.C., in 1973. At that time, the world's most exploited cat species were listed in the treaty's appendices. Among those were the jaguar, margay, ocelot, leopard, and cheetah. Left unprotected were the American bobcat and Canadian lynx, among others.

As CITES came into force and the protection for the cats first listed began to work, the pressure of the spotted cat trade shifted to the cat species which did not have CITES protection. Suddenly the bobcat, lynx, and other unprotected cats began showing up in large quantities in fur markets and fur salons in Europe. The United Kingdom, a major importer, could readily see the shift in exploited cats. As a result, the United Kingdom proposed at the first meeting of CITES parties, held in 1976, that all cats which were then unprotected should be protected by CITES appendix II. The logic was clear, concise, and cogent:

All cats are potentially involved in the fur trade and the scale of this trade is such that all species must be considered as vulnerable, few populations now remaining unaffected * * *.

The United Kingdom proposal was accepted by the required two-thirds majority and the cats were listed.

The U.S. Government, whose delegation at that time included the executive vice president of the International Association of Fish and Wildlife Agencies, both endorsed and supported the United Kingdom proposal.

The CITES listing which became effective in February 1977 was particularly timely for the American bobcat. The bobcat's spotted furs, once dismissed by furriers as inferior, was being avidly sought to replace the fur of endangered cats no longer legally available to the trade. Pelt prices were literally skyrocketing; for example, in Montana, the price was \$20 in 1968 versus \$200 in 1976; since that time prices up to \$650 have been found for one pelt, and the available information showed that populations were declining.

Unfortunately, State fish and game agencies were caught largely unaware by the foreign demand for bobcats. Many state agencies had no management programs or legal authority over the bobcat, while others considered the bobcat a varmint that could be killed at will.

In January 1977, Defenders of Wildlife petitioned the Department of the Interior to list the bobcat under the Endangered Species Act [ESA]. In July 1977, Interior published notice of its determination that Defenders had presented substantial evidence and that a review of the species' status would be undertaken.

The 1977-78 season was the first for which the United States, was obligated by CITES to determine that the export of bobcat pelts would not be detrimental to the survival of the species. The U.S. Scientific Authority, designated under CITES to make no-detriment findings, proposed that no bobcat exports be allowed since

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what little information was available showed the species' status to be poor.

In response to Defenders' petition under ESA and the Scientific Authority action under CITES, fur and trapping interests generated thousands of letters to Capitol Hill and the Interior Department to pressure the responsible Government agencies. Indeed, one trapping publication awarded to the head of the Scientific Authority the Skunk of the Year award.

State fish and game agencies, the funding for which comes largely from fees for licenses sold to hunters and trappers, and their representative, the International Association of Fish and Wildlife Agencies [IAFWA], protested vigorously as well. Their protests, however, carefully avoided the obvious economic nexus and obscured the issue of necessary protection for bobcats with cries of States rights.

Totally ignored was the fact that bobcat populations were extirpated or in jeopardy over much of the United States not because of Federal intervention but, rather, precisely because management programs were generally nonexistent or grossly inadequate. Also ignored in the protests were the international obligations of the United States to enforce CITES both nationally and internationally.

International obligations notwithstanding, both the Scientific Authority and Interior capitulated under the pressure. The Scientific Authority dropped the export ban for the 1977-78 season in favor of State-by-State export quotas which were never enforced anyway. In subsequent years, the Scientific Authority dropped even the quotas and simply approved unlimited export. Interior never conducted the status review of the bobcat under ESA, which Interior itself had previously determined was in fact warranted.

As a consequence of the Government's failure to comply with CITES or to provide protection for the bobcat under ESA, Defenders of Wildlife, where I was for 6½ years as executive vice president, brought a lawsuit under CITES. That suit, which was finally decided by the U.S. Supreme Court's refusal to review the February 3, 1981, court of appeals decision, provides the crux of current debate.

Numerous arguments have been leveled at the court decision, at bobcat protection under CITES, and indeed at CITES itself. All of these, you either have heard or will hear in some detail today. However, lost in all of the rhetoric are the reasons why bobcat protection under CITES is appropriate and necessary for the bobcat and critical to this Nation and the CITES treaty. My discussion of these reasons follows:

Last, I will address the continuing concern that has been raised, Mr. Chairman, by you and others that bobcat protection under the legal standards applicable to CITES is simply too expensive.

The court of appeals decision is consistent with CITES, and with modern-day wildlife management and should not be changed by Congress.

The court of appeals invalidated the Government's standards for approving export and affirmed CITES' clear intent that the benefit of any doubt concerning the effects of trade must be given to species protection and not to continued exploitation. The court also es-

established two primary information requirements before bobcat exports could be allowed from any State.

First, the court decision required a reasonably reliable estimate of the size of the population which would be subjected to killing. Second, the court required some limitation on the number to be killed.

Court of appeals decision is consistent with CITES.

The court's ruling with regard to population estimates is compelled by the language and standards of the CITES treaty itself. Concerning the exports of appendix II species, such as the bobcat, CITES article IV states:

2. (a) A Scientific Authority of the state of export has advised that such export will not be detrimental to the survival of that species;

2. * * * the export of specimens of any such species should be limited in order to maintain that species throughout its range at a level consistent with its role in the ecosystem in which it occurs and well above the level at which that species might become eligible for inclusion in Appendix I.

The emphasis on population level reflected in this treaty language clearly implies the need for quantitative analysis of existing bobcat populations—beyond gross assessment of change as reflected by population trend information—to determine the appropriate level of export.

The court of appeals decision is consistent with modern day wildlife management.

Fur and trapping interests and the IAFWA are claiming that reliable population estimates cannot be obtained and that this court-established requirement threatens wildlife management in this country. Under scrutiny, these arguments can be seen for what they are: Scare tactics, motivated by a desire to circumvent the requirements of CITES in order to kill and export unlimited numbers of bobcats.

It is important to understand that the court of appeals requirement of reliable population estimates simply reflects the common-sense proposition that before allowing significant levels of killing, one should have at least a reliable estimate of the minimum size of the population from which the kill will be taken, so that excessive killing can be avoided.

It is also important to understand what the court of appeals said about population estimates. The court specifically rejected as unrealistic head counts of animals but, rather, required reasonably reliable estimates of population numbers, as in the case of your State's Louisiana alligators, Mr. Chairman.

Further, the court did not specify which of the many available techniques for estimating populations should be used or what factors should be considered in establishing reliability. Instead, the court recognized the discretion of the responsible Government agency in this area. For its part, Defenders of Wildlife attempted to assist the Government in complying with the appeals court decision by suggesting guidelines for evaluating the reliability of population estimates, all to no avail.

The district court-ordered export injunction of April 1981 made it abundantly clear that the Government must comply with the appeals court ruling for export to be allowed this season. Nevertheless, the Government has failed to make a good-faith effort to do so.

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Rather, the Government, the fur industry, trappers, hunters, and the IAFWA have all proceeded to protest that determining reliable minimum population estimates is impossible, and that they must have legislative relief.

The illogic of this position for Federal and State fish and wildlife agencies is readily apparent from the fact that the Wildlife Management Techniques Manual, 1969 and 1980 editions, contains chapters devoted to standardized techniques of estimating population size. Moreover, the manual even asserts, "The methods of estimating numbers of animals have now achieved a level of sophistication worthy of a mature science."

The illogic of International Associations position is further apparent from the fact that these same government agencies, which are now protesting so loudly, last year strongly supported legislation—the Fish and Wildlife Conservation Act of 1980, Public Law 96-366—which requires determination of the population size of nongame species before management plans can be approved or funded.

Clearly, the inescapable conclusion is that the current opposition to determining minimum population levels of bobcats reflects nothing more than a conscious effort to avoid U.S. treaty requirements. And while one may have trouble comprehending the rationale of the IAFWA for undermining species' protection and the CITES treaty, it is not at all difficult to understand why the fur and trapping interests are attempting to do so.

Finally, the court-established requirement for population estimates is being portrayed by the special interests which seek to prevent proper implementation of CITES as a standard that will be used to challenge harvesting of other species under a myriad of domestic laws. This argument is also spurious. CITES is an international treaty with its own particular requirements and legislative history. CITES requirements only apply to animals and plants protected under CITES by inclusion in its appendixes. Moreover, the judicial requirements for bobcat export are based squarely on the particular CITES language.

Any amendment to the Endangered Species Act that alters U.S. obligations under CITES would harm wildlife and this Nation's international reputation.

Amendment of the Endangered Species Act to undermine CITES would have serious negative ramifications. First, such an amendment would mean the significant loss of legitimate protection from harmful levels of international trade for the American bobcat and other domestic species now listed on CITES Appendix II—Lynx and River Otter—and those which might be listed in the future.

Second, such amendment is likely to set a dangerous precedent; namely, that impartial judicial interpretation of U.S. obligations under international agreements can be negated by special interest groups through domestic legislation secured by applying political pressure. If the United States desires to alter the standards of the CITES treaty for wildlife protection, it should do so through the proper forum, the regular meetings of the 73 nation-members to CITES.

Third, unilateral weakening of the treaty's protective standards by the United States over a controversial domestic species would

seriously undermine the CITES treaty and the U.S. credibility. The United States has pushed strongly to bring about the protection of nonnative species such as the endangered cats—cheetah, leopard, ocelot, and jaguar—in their countries of origin and through control of international trade. Failure to comply in good faith with CITES for the domestic bobcat will certainly be perceived as a double standard for wildlife protection.

Finally, U.S. renunciation of necessary protection for bobcats undoubtedly will encourage other nations to disregard CITES protective provisions with respect to other listed species.

Bobcat protection under CITES is necessary and appropriate.

We have discussed the sequence of events which led the United Kingdom to propose the listing of all Felidae at the 1976 Conference of the Parties in Berne, Switzerland. In short, the listing was a result of excessive spotted-cat trade which shifted to unprotected species as a result of the protection provided in 1973 to the world's most endangered spotted cats. Clearly, the massive, uncontrolled, and unlimited destruction of bobcats which was occurring at that time, and which was acknowledged by both the Fish and Wildlife Service [FWS] and Endangered Species Scientific Authority, showed the wisdom and appropriateness of providing appendix II protection for the bobcat.

In that regard, it is important to recall that CITES mandates protection for animals on appendix II essentially if they are threatened or likely to become so if trade is not controlled. That is precisely the situation which applied, and still applies, to bobcats. Now, however, the Fish and Wildlife Service and others would have us believe that the bobcat listing, if ever appropriate, is now inappropriate, presumably because the management programs of the States are sufficient to protect the bobcat.

The exhaustive record from the litigation makes clear—and the court of appeals essentially agreed—that information available from State management programs—on the basis of which the Federal Government was generally approving unlimited export and unlimited kill—is generally inadequate to insure compliance with CITES. Even now, some States allow unlimited killing of bobcats throughout the year. Furthermore, the FWS—on its own—prohibited export this year from one State and limited export from four others in order to comply with even its own permissive interpretation of CITES.

Despite the court ruling, the facts surrounding various State management programs, and its own export restrictions, the FWS has now subsequently announced that State management programs are adequate to protect the bobcat and the bobcat no longer requires CITES protection. The logic of this position is fleeting, at best. At worst, there is no logic at all. Indeed, given this sequence of events, the only conclusion seems to be that the current FWS position is based upon political pressure, not upon the perceived adequacy or inadequacy of State programs.

Finally, Mr. Chairman, I want to address the nagging issue which you raised in your remarks in the Congressional Record that CITES compliance and bobcat protection under legally mandated standards are using financial resources which might better be used elsewhere.

Initially, it is important to reiterate that CITES is a treaty that in large measure was conceived of and developed by the United States. It has been ratified by the Senate, and accepted as a legitimate and appropriate portion of the international obligations of this country. To the extent that these international obligations impose some expense to this country and its citizens, that is simply a legitimate cost of obligations which this country believes are important.

This situation is no different with respect to CITES than it is with respect to literally hundreds of other international treaties which have been negotiated by the executive, ratified by the Senate, and adopted by this Nation as the law of the land. All, in all likelihood, cost this Nation and its taxpaying citizens something by virtue of this Nation's good-faith compliance with the terms of the treaties. However, the existence of such costs emphatically provides no justification for having our Congress unilaterally undermine a treaty's implementation standards in this country.

The fact that the cost of complying with CITES requirements with respect to the bobcat listing is costing State fish and game agencies funds is not surprising, particularly in light of the demands by these same agencies that they be given nearly complete responsibility for the Federal obligations under the treaty. Now, however, after having obtained as much responsibility as is consistent with the overall Federal responsibilities, the very States in question are now heard to complain that meeting such responsibilities costs money.

One might note, at least in passing, that one alternative for reducing State expense is, then, for the States to refuse the responsibility, thereby leaving the Federal Government with total responsibility and the States with no voice whatever. No one has seriously made such a suggestion. I do not do so now, but I want to note that it is at least one alternative.

A better alternative, we believe, is a cooperative working relationship, such as the one existing now, where the States have some responsibility for gathering data and conducting sound scientifically based management programs; but the Federal Government has, as it must, the responsibility for making, on the basis of data received, "no detriment" findings under the legally appropriate standards for CITES compliance.

There are at least two ways in which this management program might appropriately receive additional funding at the State level. First, and least desirable: to the extent that Congress finds the additional responsibilities on State fish and game agencies to be excessive, Congress could appropriate additional sums for these agencies, specifically for improving their management programs to meet CITES requirements. Indeed, the groups which I am representing today would be willing to consider and potentially support a proposal along those lines.

Mr. Chairman, a second, more appealing source of funding for these management programs would be to tax or charge those responsible for making these programs a necessity. You must recall that it was neither Defenders of Wildlife, the Humane Society, the U.S. court of appeals, or CITES itself which required CITES protection for the bobcat. Quite the contrary, it was the furriers, trap-

pers. and associated interests which killed or directly contributed to killing such large numbers of bobcats for the European fur market as to make CITES protection for this cat a necessity.

And, CITES, and the court of appeals, have only required elements of a management program which should characterize any high-quality, scientifically based management program for an exploited species. Indeed, the States might well freely accept these parameters as being sound components of their management programs for all species, not just CITES-listed species and nongame.

In any event, it follows logically that the cost necessary to provide the type of management program which is clearly necessary to meet our international obligations under CITES is best and most appropriately borne by those who are reaping the substantial profit from mass and inhumane exploitation of this species.

Mr. Bowman mentioned earlier that hunters and trappers had put quite a lot of funding into State fish and game programs. I am suggesting that we extend that here to cover the damage and necessary costs which mass destruction of bobcats is causing.

In conclusion, the U.S. court rulings concerning bobcat protection under CITES, far from being the travesty which some have suggested, simply represent proper interpretation of U.S. obligations under the treaty.

And, as we have shown, the standards set by the treaty and interpreted by the court of appeals do not present an impossible burden to the Federal Government or the State fish and wildlife agencies. Indeed, as early as the settlement discussions which began in May 1981, Defenders of Wildlife proposed an outline of guidelines which would have allowed export from most States and still satisfied the CITES requirements. The Federal Government and the International Association of Fish and Wildlife Agencies refused to negotiate and the settlement discussions broke down.

In September 1981 when the Fish and Wildlife Service proposed export findings which failed to comply with CITES, Defenders again proposed guidelines which would allow bobcat export, while meeting the standards of CITES. Again, the Fish and Wildlife Service refused to comply, apparently hoping that the U.S. Congress would simply alter our treaty obligations.

Now these same agencies and interests have come to Congress to ask for relief from the consequences of their own failure to take positive action. The travesty would occur if Congress were now to provide a legislative "fix" and back away from our international responsibilities.

We urge the Congress, therefore, to reject any amendment to the Endangered Species Act which would alter our international or national obligations under CITES, and to reaffirm that it, as the courts, expect this Nation to comply fully with these obligations.

[The prepared statement of John Grandy follows:]

STATEMENT OF JOHN W. GRANDY, PH. D., VICE PRESIDENT/WILDLIFE AND ENVIRONMENT, THE HUMANE SOCIETY OF THE UNITED STATES

Mr. Chairman, my name is Dr. John W. Grandy. I am Vice President for Wildlife and Environment at The Humane Society of the United States, and am President of Monitor, Inc., the consortium of Animal Welfare, Environmental, and Conservation groups.

I hold a Ph. D. degree in wildlife ecology and management from the University of Massachusetts. In the past, I have held positions with the U.S. Fish and Wildlife Service, U.S. Forest Service, Virginia Commission of Game and Inland Fisheries, and the National Parks and Conservation Association. In 1972 and 1973, during my employment with the National Parks and Conservation Association, I was intimately involved in formulating and negotiating the treaty now known as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (hereinafter CITES.) In addition, I worked with CITES and the Endangered Species Act when I was employed by the President's Council on Environmental Quality in 1974 and 1975. In 1977, I was a member of the U.S. Delegation to the Special Working Group meeting of CITES Parties held in Geneva, Switzerland. Subsequently, as Executive Vice President of Defenders of Wildlife (from 1975 to 1981), I formulated and guided the bobcat litigation under CITES, the results of which provide much of the subject matter being discussed at these hearings. I am presenting this statement today on behalf of Defenders of Wildlife, since I headed Defenders at the time the suit was begun, since I have substantial expertise with respect to the issue, and since the suit is, after all, an action brought solely by Defenders of Wildlife.

I appreciate the opportunity to testify today on behalf of the 260,000 members and constituents of The Humane Society of the United States, Defenders of Wildlife, and the National Parks and Conservation Association. At the outset, we wish to stress that these organizations strongly support the Endangered Species Act of 1973 and reauthorization of the Act without weakening amendment. Our view on issues other than the Bobcat issue will presumably be addressed in the testimony of M. Bean and K. Berlin before this Subcommittee on March 8, 1982, on behalf of many conservation organizations including Defenders of Wildlife, The Humane Society of the United States, and the National Parks and Conservation Association. Consequently, we will limit our remarks herein to the controversial Bobcat issue. In addition, we attach for the record a letter from our counsel, Covington and Burling, providing its legal opinion of any attempt to modify CITES or the Court of Appeals decision through amendment of the Endangered Species Act.

Initially, we regret the image which the numerous witnesses opposing bobcat protection and CITES tend to present. Indeed, with the volume of testimony being delivered in opposition to CITES protection for the Bobcat, one might think this protection a travesty.

Nothing could be further from the truth. Bobcat protection as our remarks will demonstrate, is appropriate and mandated. The opposition to this protection is generated by a combination of the economics of fur, trapping, and fish and game agency funding, which is served by continued overexploitation of the bobcat, rather than U.S. compliance with its international commitments. For these reasons and others which follow, it is our view that this committee should reject any amendments to the Endangered Species Act which would decrease protection for the American Bobcat or undermine the CITES treaty, and instead strongly support both bobcat protection and CITES.

I. BACKGROUND

In order to control international trade threatening wildlife and plant species, the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) was negotiated in Washington, D.C., in 1973.¹ At that time, the world's most exploited cat species were listed in the Treaty's appendices. Among those were the jaguar, margay, ocelot, leopard, and cheetah. Left unprotected were the American Bobcat and Canadian Lynx, among others.

As CITES came into force and the protection for the cats first listed began to work, the pressure of the spotted cat trade shifted to the cat species which did not have CITES protection. Suddenly, the bobcat, lynx, and other unprotected cats began showing up in large quantities in fur markets and fur salons in Europe. The United Kingdom, a major importer, could readily see the shift in exploited cats. As a result, the United Kingdom proposed at the first meeting of CITES Parties (held in 1976) that all cats which were then unprotected should be protected by CITES Appendix II.² The logic was clear, concise, and cogent:

¹ Largely drafted by the U.S., the CITES Treaty is frequently referred to as the "Washington Convention." Now 73 nations are members to this landmark agreement.

² In order to be listed in Appendix II, animals must either be threatened with extinction, or likely to become so, if trade is not controlled. Clearly, the massive increase in trade in the once unprotected Bobcat, shows the wisdom and appropriateness of this listing.

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"All cats are potentially involved in the fur trade and the scale of this trade is such that all species must be considered as vulnerable, few populations now remaining unaffected . . ."

The U.K. proposal was accepted by the required two-thirds majority and the cats were listed.³

The CITES listing which became effective in February 1977, was particularly timely for the American Bobcat. The Bobcat's spotted fur, once dismissed by furriers as "inferior," was being avidly sought to replace the fur of endangered cats no longer legally available to the trade. Pelt prices were literally skyrocketing (e.g., Montana: \$20 in 1968 vs. \$200 in 1976) and the available information showed that populations were declining. Unfortunately, state fish and game agencies were caught largely unaware by the foreign demand for bobcats. Many state agencies had no management programs for legal authority over the bobcat, while others considered the bobcat a varmint that could be killed at will.

In January 1977, Defenders of Wildlife petitioned the Department of Interior to list the Bobcat under the Endangered Species Act (ESA). In July 1977, Interior published notice of its determination that Defenders had presented "substantial evidence," and that a review of the species' status would be undertaken.

The 1977-78 season was the first for which the U.S. was obligated by CITES to determine that the export of Bobcat pelts would "not be detrimental to the survival" of the species. The U.S. Scientific Authority, designated under CITES to make "no detriment" findings, proposed that no Bobcat exports be allowed since what little information was available showed the species' status to be poor.

In response to Defenders' petition under ESA and the Scientific Authority action under CITES, fur and trapping interests generated thousands of letters to Capitol Hill and the Interior Department to pressure the responsible government agencies. Indeed one trapping publication awarded to the head of the Scientific Authority the "Skunk of the Year" award. State fish and game agencies, the funding for which comes largely from fees for licenses sold to hunters and trappers, and their representative, International Association of Fish and Wildlife Agencies (IAFWA), protested vigorously as well. Their protests, however, carefully avoided the obvious economic nexus and obscured the issue of necessary protection for bobcats with cries of "states' rights."

Totally ignored was the fact that bobcat populations were extirpated or in jeopardy over much of the U.S. not because of Federal intervention but rather precisely because management programs were generally non-existent or grossly inadequate.⁴ Also ignored in the protests were the international obligations of the United States to enforce CITES both nationally and internationally.

International obligations notwithstanding, both the Scientific Authority and Interior capitulated under the pressure. The Scientific Authority dropped the export ban for the 1977-78 season in favor of state-by-state export quotas which were never enforced anyway. In subsequent years, the Scientific Authority dropped even the quotas and simply approved unlimited export. Interior never conducted the status review of the Bobcat under ESA, which Interior itself had previously determined was in fact warranted.

As a consequence of the Government's failure to comply with CITES or to provide protection for the Bobcat under ESA, Defenders of Wildlife brought a lawsuit under CITES. That suit, which was finally decided by the U.S. Supreme Court's refusal to review the February 3, 1981, Court of Appeals decision provides the crux of current debate.

Numerous arguments have been leveled at the Court decision, at bobcat protection under CITES, and indeed at CITES itself. All of these, you either have heard or will hear in some detail today. However, lost in all of the rhetoric are the reasons why bobcat protection under CITES is appropriate and necessary for the bobcat and critical to this nation and the CITES treaty. My discussion of these reasons follow. Lastly, I will address the continuing concern that has been raised, Mr. Chairman, by you and others that bobcat protection under the legal standards applicable to CITES is simply too expensive.

³ The U.S. Government, whose delegation included the Executive Vice President of International Association of Fish and Wildlife Agencies, endorsed and supported the U.K. proposal.

⁴ The State Fish and Game Agencies' position thus became, and indeed remains today, analogous to that of the man trying to shoot a messenger because the messenger is carrying "bad news."

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II. THE COURT OF APPEALS DECISION IS CONSISTENT WITH CITES, AND WITH MODERN DAY WILDLIFE MANAGEMENT AND SHOULD NOT BE CHANGED BY CONGRESS

The Court of Appeals invalidated the Government's standards for approving export and, affirmed CITES' clear intent that the benefit of any doubt concerning the effects of trade must be given to species' protection and not to continued exploitation. The Court also established two primary information requirements before Bobcat exports could be allowed from any state. First, the court decision required a reasonably reliable estimate of the size of the population which would be subjected to killing. Second, the Court required some limitation on the number to be killed.⁵

a. Court of Appeals Decision is consistent with CITES.—The Court's ruling with regard to population estimates is compelled by the language and standards of the CITES Treaty itself. Concerning the exports of Appendix II species, such as the Bobcat, CITES Article IV states:

"2. (a) A Scientific Authority of the State of export has advised that such export will not be detrimental to the survival of that species;

"2. . . . the export of specimens of any such species should be limited in order to maintain that species throughout its range at a level consistent with its role in the ecosystem in which it occurs and well above the level at which that species might become eligible for inclusion in Appendix I." (Emphasis supplied.)

The emphasis on population level reflected in this Treaty language clearly implies the need for quantitative analysis of existing bobcat populations—beyond gross assessment of change as reflected by population "trend" information—to determine the appropriate level of export.

b. The Court of Appeals Decision is Consistent with Modern Day Wildlife Management.—Fur and trapping interests and the IAFWA are claiming that reliable population estimates cannot be obtained and that this court-established requirement threatens wildlife management in this country. Under scrutiny these arguments can be seen for what they are—scare tactics—motivated by a desire to circumvent the requirements of CITES in order to kill and export unlimited numbers of Bobcats.

It is important to understand that the Court of Appeals requirement of reliable population estimates simply reflects the common-sense proposition that before allowing significant levels of killing, one should have at least a reliable estimate of the minimum size of the population from which the kill will be taken, so that excessive kill can be avoided.

It is also important to understand what the Court of Appeals said about population estimates. The Court specifically rejected as unrealistic, head counts of animals, but rather required reasonably reliable estimates of population numbers. Further, the Court did not specify which of the many available techniques for estimating populations should be used or what factors should be considered in establishing reliability. Instead, the Court recognized the discretion of the responsible government agency in this area. For its part, Defenders of Wildlife attempted to assist the Government in complying with the appeals court decision by suggesting guidelines for evaluating the reliability of population estimates. All to no avail.

The District Court-ordered export injunction (April 1981) made it abundantly clear that the Government must comply with the appeals court ruling for export to be allowed for the current season. Nevertheless, the Government has failed to make a good-faith effort to do so.⁶

Rather, the Government, the fur industry, trappers, hunters and the IAFWA have all proceeded to protest that determining reliable minimum population estimates is impossible, and that they must have "legislative relief." The illogic of this position for federal and state fish and wildlife agencies is readily apparent from the fact that the Wildlife Management Techniques Manual (1969 and 1980 editions) contains chapters devoted to standardized techniques of estimating population size. More-

⁵ This aspect of the decision is not discussed herein since no one seems to suggest that it is an inappropriate criterion. Notwithstanding that, many states still do not limit kill in any effective way.

⁶ The lack of government guidelines or standards for reliably estimating bobcat populations hampered many fish and game agencies attempting to develop reliable estimates and secure export approvals for the 1981-82 season. Some state agencies attempted to develop population estimates for the Bobcat and submit them to the government as early as 1977. (See 43 F.R. 11088; March 16, 1978). Other states lacking reliable estimates of Bobcat numbers have voluntarily closed off harvesting seasons. The state of Connecticut, for example, closed its Bobcat season in 1974 in order to protect the Bobcat until sufficient data could be collected to estimate the population size.

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over, the Manual even asserts, "The methods of estimating numbers of animals have now achieved a level of sophistication worthy of a mature science."⁷

The illogic is further apparent from the fact that these same government agencies last year strongly supported legislation (The Fish and Wildlife Conservation Act of 1980, P.L. 96-366) which requires determination of the population size of non-game species.

Clearly, the inescapable conclusion is that the current opposition to determining minimum population levels of Bobcats reflects nothing more than a conscientious effort to avoid U.S. Treaty requirements. And while one may have trouble comprehending the rationale of the IAFWA for undermining species' protection and the CITES Treaty, it is not at all difficult to understand why the fur and trapping interests are attempting to do so.

Finally, the court-established requirement for population estimates is being portrayed by the special interests which seek to prevent proper implementation of CITES for the Bobcat as a standard that will be used to challenge harvesting of other species under a myriad of domestic laws. This argument is also spurious. CITES is an international treaty with its own particular requirements and legislative history. CITES requirements only apply to animals and plants protected under CITES by inclusion in its appendices. Moreover, the judicial requirements for Bobcat export are based squarely on the particular CITES language.

III. ANY AMENDMENT TO THE ENDANGERED SPECIES ACT THAT ALTERS U.S. OBLIGATIONS UNDER CITES WOULD HARM WILDLIFE AND THIS NATION'S INTERNATIONAL REPUTATION

Amendment of the Endangered Species Act to undermine CITES would have serious negative ramifications. First, such an amendment would mean the significant loss of legitimate protection from harmful levels of international trade for the American Bobcat and other domestic species now listed on CITES Appendix II (Lynx and river Otter) and those listed in the future.

Second, such amendment is likely to set a dangerous precedent; namely, that impartial judicial interpretation of U.S. obligations under international agreements can be negated by special interest groups through domestic legislation secured by applying political pressure. If the U.S. desires to alter the standards of the CITES Treaty for wildlife protection, it should do so through the proper forum, the regular meeting of the 73 nation-members to CITES.

Third, unilateral weakening of the Treaty's protective standards by the U.S. over a controversial domestic species would seriously undermine the CITES Treaty and U.S. credibility. The U.S. has pushed strongly to bring about the protection of non-native species such as the endangered cats (cheetah, leopard, ocelot and jaguar) in their countries of origin and through control of international trade. Failure to comply in good faith with CITES for the domestic Bobcat will certainly be perceived as a double-standard for wildlife protection. Such action on the part of this nation, a primary drafter and negotiator of the "Washington Convention" and until recently a strong proponent of species' protection, will undoubtedly undermine the Treaty's success in controlling international trade in listed species.

Finally, U.S. renunciation of necessary protection for bobcats undoubtedly will encourage other nations to disregard CITES protective provisions with respect to other listed species. After all, if the nation which proposed CITES can ignore the Treaty's protective provisions for internal political reasons, then other nations which look to the U.S. for guidance can certainly be expected to take the same attitude.

IV. BOBCAT PROTECTION UNDER CITES IS NECESSARY AND APPROPRIATE

We have discussed, (*supra* at pages four and five) the sequence of events which led the United Kingdom to propose the listing of all Felidae at the 1976 Conference of the Parties in Berne, Switzerland. In short, the listing was a result of excessive spotted cat trade which shifted to unprotected species as a result of the protection provided in 1973 to the world's most endangered spotted cats. Clearly, the massive, uncontrolled, and unlimited destruction of bobcats which was occurring at that time, and which was acknowledged by both the Fish and Wildlife Service (FWS) and Endangered Species Scientific Authority, showed the wisdom and appropriateness of providing Appendix II protection for the bobcat.

In that regard, it is important to recall that CITES mandates protection for animals on Appendix II essentially if they are threatened or likely to become so if

⁷ Wildlife Management Techniques Manual". 1980, 4th edition. The Wildlife Society: Washington, D.C., p. 221.

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trade is not controlled. That is precisely the situation which applied and still applies, to bobcats. Now, however, the FWS and others would have us believe that the bobcat listing, if ever appropriate, is now inappropriate, presumably because the management programs of the states are sufficient to protect the bobcat.

The exhaustive record from the litigation makes clear—and the Court of Appeals essentially agreed—that information available from state management programs (on the basis of which the federal government was generally approving unlimited export and unlimited kill) is generally inadequate to insure compliance with CITES. Even now, some states allow unlimited killing of bobcats throughout the year. Furthermore, the FWS—on its own—prohibited export this year from one state and limited export from four others in order to comply with even its own permissive interpretation of CITES.

Despite the Court ruling, the facts surrounding various state management programs and its own export restrictions, the FWS has now subsequently announced that state management programs are adequate to protect the bobcat and the bobcat no longer requires CITES protection. The logic of this position is fleeting, at best. At worst, there is no logic at all. Indeed, given this sequence of events, the only conclusion seems to be that the current FWS position is based upon political pressure, not upon the perceived adequacy or inadequacy of state programs.

Notwithstanding the above, however, one important point does emanate from the current FWS efforts to remove protection for the bobcat. That point is that if the FWS wants to remove the bobcat from protection under the treaty or even weaken the CITES treaty, the appropriate mechanism for such actions is that provided specifically by CITES: official proposals to the 73 CITES member nations.⁶ By contrast, it is entirely inappropriate for furriers, trappers, and others to now run to the U.S. Congress in the hope that the Congress will unilaterally provide a way of weakening CITES implementation standards for this country.

V. THE EXPENSE OF BOBCAT PROTECTION UNDER CITES IS A NECESSARY PART OF OUR INTERNATIONAL OBLIGATIONS TO CONSERVE WILDLIFE, RESULTING DIRECTLY FROM THE MASSIVE EXPLOITATION OF THE BOBCAT BY THE FUR INDUSTRY; SUCH NECESSARY EXPENSE PROVIDES NO RATIONALE FOR UNILATERAL WEAKENING OF CITES, BUT RATHER CLEAR RATIONALE FOR REDUCING KILL AND IMPROVING STATE MANAGEMENT SO THAT THE BOBCAT MAY BE APPROPRIATELY DELISTED

Finally, Mr. Chairman, I want to address the nagging issue, which you raised in your remarks in the Congressional Record that CITES compliance and bobcat protection under legally mandated standards are using financial resources, which might better be used elsewhere.

Initially, it is important to reiterate that CITES is a treaty that in large measure was conceived of, and developed by the United States. It has been ratified by the Senate, and accepted as a legitimate and appropriate portion of the international obligations of this country. To the extent that these international obligations impose some expense to this country and its citizens, that is simply a legitimate cost of obligations which this country believes are important.

This situation is no different with respect to CITES than it is with respect to literally hundreds of other international treaties, which have been negotiated by the executive, ratified by the Senate, and adopted by this nation as "the law of the land." All, in all likelihood, cost this nation and its taxpaying citizens something by virtue of this nation's good faith compliance with the terms of the treaties. However, the existence of such costs emphatically provides no justification for having our Congress unilaterally undermine a treaty's implementation standards in this country.

The fact that the cost of complying with CITES requirements with respect to the bobcat listing is costing State Fish and Game Agencies funds is not surprising, particularly in light of the demands by these same agencies that they be given nearly complete responsibility for the federal obligations under the treaty. Now, however, after having obtained as much responsibility as is consistent with overall federal responsibilities, the very states in question are now heard to complain that meeting such responsibilities costs money.

One might note, at least in passing, that one alternative for reducing state expense is, then, for the states to refuse the responsibility, thereby leaving the federal government with total responsibility and the states with no voice whatever. No one has seriously made such a suggestion. I do not do so now, but I want to note that it is at least one alternative.

⁶ Indeed, the FWS has now initiated a postal vote procedure in an attempt to have the 73 nations agree that the bobcat should not be listed on Appendix II.

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A better alternative, we believe, is a cooperative working relationship, such as the one existing now, where the states have some responsibility for gathering data and conducting sound scientifically based management programs; but the federal government has, as it must, the responsibility for making, on the basis of data received, no detriment findings under the legally appropriate standards for CITES compliance.

There are at least two ways in which this management program might appropriately receive additional funding at the state level. First, and least desirable: to the extent that Congress finds the additional responsibilities on state fish and game agencies to be excessive, Congress could appropriate additional sums for these agencies, specifically for improving their management programs to meet CITES requirements. Indeed, the groups which I am representing today would be willing to consider and potentially support a proposal along those lines.

Mr. Chairman, a second, more appealing source of funding for these management programs would be to tax or charge those responsible for making these programs a necessity. You must recall that it was neither Defenders of Wildlife, The Humane Society, the U.S. Court of Appeals, nor CITES itself which required CITES protection for the bobcat. Quite the contrary, it was the furriers, trappers, and associated interests which killed or directly contributed to killing such large numbers of bobcats for the European fur market as to make CITES protection for this cat a necessity.

And CITES and the Court of Appeals have only required elements of a management program (population estimates and an appropriate ceiling on the number which may be killed) which should characterize any high quality, scientifically based management program for an exploited species. Indeed, the states might well freely accept these parameters as being sound components of their management programs for all species, not just CITES listed species and non-game.

In any event, however, it follows logically that the cost necessary to provide the type of management program which is clearly necessary to meet our international obligations under CITES is best and most appropriately borne by those who are reaping the substantial profit from mass and inhumane exploitation of this species.

CONCLUSION

The U.S. Court rulings concerning bobcat protection under CITES, far from being the travesty which some have suggested, simply represent proper interpretation of U.S. obligations under the Treaty.

And, as we have shown, the standards set by the Treaty and interpreted by the Court of Appeals do not present an impossible burden to the Federal Government or the state fish and wildlife agencies. Indeed, as early as the settlement discussions which began in May of 1981, Defenders of Wildlife proposed an outline of guidelines which would have allowed export from most states and still satisfied the CITES requirements. The Federal Government and the International Association of Fish and Wildlife Agencies refused to negotiate and the settlement discussions broke down. In September 1981 when the Fish and Wildlife Service proposed export findings which failed to comply with CITES, Defenders again proposed guidelines which would allow bobcat export, while meeting the standards of CITES. Again, the Fish and Wildlife Service refused to comply, apparently hoping that the U.S. Congress would simply alter our treaty obligations.

In fact, since February 3, 1981, when the Court of Appeals ruled, neither the Fish and Wildlife Service nor the International Association of Fish and Wildlife Agencies have taken even a single good faith step toward complying with the mandate of CITES and the Court of Appeals ruling.

Now these same agencies and interests have come to Congress to ask for "relief" from the consequences of their own failure to take positive action. The travesty would occur if Congress were now to provide a legislative "fix" and back away from our international responsibilities.

We urge the Congress, therefore, to reject any amendment to the Endangered Species Act which would alter our international or national obligations under CITES, and to reaffirm that it, as the courts, expect this nation to comply fully with these obligations.

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COVINGTON & BURLING,
Washington, D.C., February 18, 1982.

Dr. JOHN W. GRANDY, Ph. D.,
Vice President for Wildlife and Environment, The Humane Society of the United States, Washington, D.C.

VIRGINIA L. MERCHANT,
Endangered Species Specialist, Defenders of Wildlife, Inc., Washington, D.C.

DEAR DR. GRANDY AND MS. MERCHANT: You have asked us, as counsel to Defenders of Wildlife, Inc., in the bobcat export litigation, for our opinion on the propriety of an amendment to the 1973 Endangered Species Act which would have the effect of nullifying or modifying the result reached in *Defenders of Wildlife, Inc. v. ESSA*, 659 F.2d 168 (D.C. Cir. 1981).

In that case, the United States Court of Appeals for the District of Columbia Circuit construed Article IV of CITES¹ which sets out the procedures for authorizing export of species, such as the bobcat, which are listed on Appendix II of the treaty. Appendix II contains species "which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation . . ." Art. II, ¶ 2(a). Specifically, the Court construed Article IV, ¶ 2(a), which requires that the Scientific Authority of each party-nation make an affirmative finding prior to approving export that such export "will not be detrimental to the survival of that species." The Court ruled that in order to make the required finding the Scientific Authority must have (1) reliable bobcat population estimates and (2) information concerning the total number of bobcats to be killed in the particular season. 659 F.2d at 177-78. The Court explicitly recognized the Scientific Authority's "considerable discretion" in determining the exact method by which population estimates are made and in evaluating their reliability. 659 F.2d at 178. The United States Supreme Court declined a petition for *certiorari*. 50 U.S.L.W. 3351 (Nov. 3, 1981). To the best of our knowledge, this is the first and only judicial construction of cites in the world.

As we understand the present situation, no particular proposed amendment has been introduced formally. We have reviewed the proposal put forth by the International Association of Fish and Wildlife Agencies (the "International") and will comment on it specifically herein; however, the other portions of this letter are addressed more generally to any legislative proposal which would reverse or modify the Court of Appeals decision described above.

In light of the record in the bobcat litigation, the history of CITES—and particularly of United States leadership in its creation—and in view of the substance of CITES itself, such legislation would be, in our opinion, inappropriate and ill advised. The Court of Appeals' decision establishes, as a matter of law, the meaning of CITES. By enacting legislation having the effect of nullifying or modifying that ruling, the United States would place itself in violation of the treaty as so construed, and would send a signal to other party-nations that it is not committed to the protection of threatened and endangered species through international cooperation to regulate trade in accordance with the treaty. Further, such legislation would set a precedent for the avoidance of the regulatory and amendment procedures under CITES in favor of unilateral, domestic action.

THE RECORD IN THE BOBCAT LITIGATION

In our role as counsel for plaintiffs in the bobcat export case, which began in 1979, we made a detailed review of the administrative record consisting of data for a number of years on bobcat populations in the various states which applied for export approval. For the vast majority of those states, the data were wholly inadequate to meet even the standards set by the United States Scientific authority as "minimum requirements," quite apart from the question of reliable population estimates. Yet virtually unlimited export was permitted each year. The evidence adduced in the litigation led to the unavoidable conclusion that the federal agencies designated by Congress to implement United States' obligations under CITES were not correctly performing their assigned responsibilities under the treaty. The Court of Appeals so held.

¹Convention on International Trade in Endangered Species of Wild Fauna and Flora, 27 U.S.T. 1087, T.I.A.S. No. 8249, opened for signature March 3, 1973, ratified by the U.S. Senate, 119 Cong. Rec. 28012 (August 3, 1973).

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THE INTERNATIONAL'S PROPOSED AMENDMENT

We have studied the amendment of the Endangered Species Act proposed by the International. In our view, that proposal goes so far in eliminating federal responsibility for controlling the export of listed species as to constitute a de facto, unilateral amendment of Article IV of CITES. As such, it would violate the treaty.

In essence, the International's proposed amendment would require export approval for any Appendix II species on the sole basis that it is "subject to" state management and was lawfully killed. This would preclude the United States Scientific Authority from making the determination as to whether the export of Appendix II species will be detrimental to those species, as required by Article IV, ¶2(a) of CITES. There would be no federal review of the substantive provisions of those management programs, which vary widely, or the manner in which they are actually carried out in each state. Under these circumstances, the United States would be in violation of Article IV, ¶2(a) of CITES, which requires an affirmative no-detriment finding by the expert Scientific Authority prior to export. Indeed, the language of the proposal could be construed to require export approval where state law merely gives a state agency the authority to manage a listed species, but where that state or state agency takes no action at all with respect to a listed species or where the state fails to enforce its management laws and regulations.

LEGAL AUTHORITY ON TREATIES AND STATE-FEDERAL RELATIONS

State-federal conflict is not a novel phenomenon where the United States enters into an international wildlife treaty which mandates federal action in areas that the states had considered under their exclusive control. The matter has long been authoritatively settled, however, in favor of federal authority to regulate wildlife under these circumstances. *Missouri v. Holland*, 252 U.S. 416 (1920). Written by Justice Oliver Wendell Holmes, the Supreme Court's opinion upheld against Missouri's constitutional attack the legislation enacted to implement the 1916 Migratory Bird Treaty between the United States and Canada.

In our opinion, legislation of the type proposed flies in the face of this well-settled principle of law, by allowing the states to limit the federal government in its implementation of a duly adopted and ratified international treaty. The proposed legislation would be, in short, a back-door, de facto repudiation of the *Missouri v. Holland* principle of federal supremacy under the Constitution with respect to treaties. As such, it could set a harmful precedent for federal implementation of other international treaties, as well as impairing the United States' credibility in its treaty relations with other nations.

The credibility problem will be exacerbated if the legislation at issue purports to eliminate—as does the International's proposal—the Court of Appeals' requirement of reliable population estimates, presumably on the asserted ground that population estimates are not needed to evaluate a species' status and/or that they are impossible to make. Such a statutory provision would be inconsistent with existing United States wildlife law. In 1980, Congress enacted the Fish and Wildlife Conservation Act, 16 U.S.C. § 2901 et seq., which requires determination by the states of population size for non-game wildlife. 16 U.S.C. § 2903. The inconsistency between that wildlife statute and the type of amendment now under consideration could only be explained by reference to the political circumstances; the states, through the International, supported the Fish and Wildlife Conservation Act and are now promoting the proposed legislation.

THE HISTORY OF U.S. LEADERSHIP IN DRAFTING CITES

The proposed legislation is particularly inappropriate because of the history of United States leadership in bringing CITES into force, a history which increases the likelihood that the proposed legislation will set a bad precedent for other nations in carrying out their own CITES obligations. The United States was one of the moving forces—if not the moving force—in the considerable effort over more than a decade to draft and finalize CITES. The treaty is the culmination of United States initiatives beginning in 1961.² In 1969, Congress by explicit statutory mandate (§ 5(b) and (c) of the Endangered Species Conservation Act of 1969, 16 U.S.C. § 668aa et seq.) endorsed the principle of an international convention to protect wildlife, and directed the Secretary of the Interior, through the Secretary of State, to convene an international meeting to draft such a treaty. That Congressional mandate led to an

² Rept. of Department of State to the President Submitting CITES, April 5, 1973, reprinted at S. Ex. H., 93d Cong., 1st Sess., also reprinted at 68 State Dept. Bull. 628 (May 14, 1973).

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invitation by this government to other states to participate in the Plenipotentiary Conference to Conclude an International Convention on Trade in Certain Species of Wildlife, held in Washington, D.C. between February 12 and March 2, 1973. That conference produced CITES.³

The United States proposed one of the three drafts which gave rise to the treaty and, further, took the initiative in sending an informal mission to the authors of the other drafts—Kenya and the International Union for the Conservation of Nature and Natural Resources (IUCN)—which achieved a unified Working Paper used at the CITES Conference. The United States made vigorous efforts to encourage other nations to participate in the CITES Conference, holding a series of preparatory meetings with representatives of foreign governments at the State Department in Washington and sending reports of those meetings to American ambassadors abroad to support United States initiatives undertaken there.⁴

Thus, the United States was instrumental in initiating the idea of a multilateral international convention to protect wildlife, in reducing the general principle to specific treaty provisions, and in obtaining agreement on CITES at the Washington Conference mandated by Congress in 1969.

In addition, the United States supported the United Kingdom proposal to list the bobcat, among other cats, on Appendix II at the First Conference of the Parties in 1976.⁵

In light of this history of leadership, legislation of the type proposed would inevitably be perceived by other party-nations as a clear break with past American commitment to international wildlife conservation. This is particularly likely given the history of the bobcat litigation, which provides the impetus for this proposed legislation, and the record in that case. Further, this legislative action by the United States might well provide a rationale for other nations to back away from their own obligations under CITES—and potentially under other wildlife treaties as well. In addition, the United States could well lose any influence it now exercises over states which are not parties to CITES to encourage them to regulate export of their endangered or threatened species.

THE CITES TREATY

CITES is the most comprehensive wildlife treaty to date. It is open to all countries and covers all species which may be designated. Moreover, unlike previous wildlife treaties to which the United States is a party and which depend primarily on the party-nations' internal control mechanisms,⁶ CITES sets out its own operating scheme for regulating international trade through a system of export and import permits. Thus, the parties to CITES obligated themselves to abide by a regime prescribed by the terms of the treaty itself, in contrast to the previous pattern of merely agreeing to broad principles or goals to be implemented by domestic measures. The proper interpretation of the language of CITES is, therefore, crucial to the proper implementation of the treaty.

It would be unseemly at best for the United States, which promoted CITES so forcefully, to allow the interpretation of its terms to be dictated by the political process, in the face of a contrary court ruling. The Court of Appeals authoritatively construed the "no detriment" language of CITES after a trial and full appellate briefing. All the various interest groups were represented in that proceeding, including the International, (representing the state wildlife agencies), the Fur Conservation Institute of America (representing the fur industry), and various individual hunters, trappers and fur buyers, all of whom were allowed to intervene and participated fully at the trial and appeals court levels. Thus, the court's construction of CITES' no-detriment standard for Appendix II species such as the bobcat is the result of an objective process in which all competing views were heard. For the United States by legislative fiat to repudiate the result reached by its own courts under these circumstances undermines the integrity of CITES. Such a reversal

³ See Rept. of Department of State, *supra* note 2; Rept. of the U.S. Delegation to CITES, submitted to the Secretary of State, reprinted at 68 State Dept. Bull. 613 (May 14, 1973).

⁴ See Rept. of U.S. Delegation, *supra* note 3, 68 State Dept. Bull. at 615-16.

⁵ See U.S. Position Paper, First Conference of the Parties (Berne, Switzerland, 1976) (unpublished) (p. 32).

⁶ E.g., Convention for the Protection of Migratory Birds, Aug. 16, 1916 (U.S.-Canada), 39 Stat. 1702, T.S. No. 628; Convention for the Protection of Migratory Birds and Game Mammals, Feb. 7, 1936 (U.S.-Mexico), 50 Stat. 1311, T.S. No. 912; Convention on Nature Protection & Wildlife Preservation in the Western Hemisphere, Oct. 12, 1940, 56 Stat. 1354, T.S. No. 981. See also Rept. of the U.S. Delegation to CITES, *supra* note 3, 68 State Dept. Bull. at 614.

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would place the United States in direct violation of CITES as thus authoritatively construed.

CITES PROVISIONS FOR AMENDMENT AND SCIENTIFIC STUDIES

CITES contains detailed provisions for amendment of the three appendices (Articles XV, XVI) and for scientific studies to facilitate implementation of the treaty (Article XII). These provisions incorporate detailed procedures for involving all party-nations. The proposed legislation may well be viewed as an avoidance by the United States of those procedures in favor of unilateral action insulated from review by other party-nations. Again, a dangerous precedent would be created for treaty revision by national mandate in derogation of the CITES multilateral procedures.

Most pertinent is the amendment provision. CITES Article XV sets up a procedure whereby any party may propose an amendment to Appendices I and II for consideration at one of the biennial meetings of the conference of the parties or by mail vote between meetings. If no objection to the proposed amendment is made, the amendment is automatically adopted; however, if an objection is made, the amendment is submitted to a vote and must be agreed to by a two-thirds majority of the parties. This dual system containing both passive and active procedural aspects was not accidental, but the deliberate result of a compromise among the parties.⁷

The standards for deleting species from the appendices were not left unstated; at the First Conference of the Parties, held in Berne, Switzerland in 1976, the parties adopted by binding resolution detailed scientific criteria, called the "Berne Criteria," for deletion.⁸

Thus, the United States is not without a remedy prescribed by CITES if it considers the bobcat or any other Appendix II species to be inappropriately listed. Indeed, the United States has submitted a proposal to "delist" the bobcat from Appendix II, in accordance with Article XV of CITES. See 47 Fed. Reg. 1242 (Jan. 11, 1982). In our opinion, the proposal is ill founded because it is a direct result of the bobcat export litigation and because the data concerning the bobcat relied upon by the United States for that delisting proposal are in large part the same data that were discredited in the bobcat litigation. Nevertheless, United States submission of the delisting proposal is a more defensible procedural course—because it allows for scrutiny by other party-nations—than that now under consideration by Congress.

Furthermore, legislation of the kind proposed undermines the credibility of the United States in the delisting proceeding by signaling to fellow treaty signators that the United States is willing to effectively absolve itself of a treaty obligation by legislation which reverses an authoritative and clear construction of CITES by a domestic court of competent jurisdiction.

Finally, CITES Article XII provides for a treaty Secretariat, a role assumed by the United Nations Environmental Programme. Among other duties, the Secretariat is empowered to undertake scientific and technical studies to facilitate implementation of CITES. Article XII, (2)(c). If the United States is uncertain about the scientific feasibility or necessity of population estimates or kill quotas as required by United States courts for Appendix II species, the proper course is to invoke Article XII and to propose scientific research on the matter, rather than to mandate by legislation that the treaty does not require these data.

In sum, any proposed legislation designed to reverse or modify the result reached in *Defenders of Wildlife, Inc. v. ESSA*, supra, would be inconsistent with United States law on treaty implementation and with CITES itself. Moreover, were the nation which led efforts to draft and adopt CITES to reject a construction of the treaty by its own courts—reached after a full trial and appellate proceeding in which state wildlife and industry groups were fully represented—an unmistakable message would be communicated that the United States intends to enforce CITES only when politically expedient and will countenance similar behavior by other countries.

Sincerely yours,

COVINGTON & BURLING,
By: Brice M. Clagett.

⁷ See Rept. of the U.S. Delegation, supra note 3, 68 State Dept. Bull. at 617.

⁸ See Rept. of the U.S. Delegation to the Conference of the Parties to CITES (Berne, Switzerland, 1976) (unpublished Rept. by the Chief of the U.S. delegation) (p. 13). See also 47 Fed. Reg. 1243, col. 2 (Jan. 11, 1982); 46 Fed. Reg. 45653, col. 2-3 (Sept. 14, 1981).

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Mr. BREAUX. Thank you, gentlemen, for your presentations. Of course your entire statements will be put into the record and thank you for trying to summarize them.

Mr. Bowman, with regard to your recommendations on behalf of the Wildlife Legislative Fund, I get the impression that the biggest concern is the fact that sport hunting might be listed as a means of endangering species. Is that really your biggest concern about the whole act?

Mr. BOWMAN. No, sir. It just happened to come first in the presentation of testimony. Our first concern is overturning the bobcat case. Second would be the mechanism for requiring the Secretary to respond to State objections over listing, delisting, or regulations, and third would be sport hunting.

Mr. BREAUX. Maybe it is a big issue. You cannot challenge my credentials as enjoying hunting. They can challenge my credentials as a hunter, but no one is going to challenge the fact that I like hunting. I do not see the big deal. You say the Secretary shall determine if any species is an endangered species or threatened species because of the following factors, and it lists everything in the world. Overutilization for sporting, scientific, or educational purposes is just one of a whole slew of things.

Mr. BOWMAN. We realize that. We made a number of proposals early on and sent them to a large number of groups around the country, and this was one of the issues along with improper listings, inadequate consultation with the States in the bobcat case, which came back to us.

Mr. BREAUX. Maybe I am missing something. I just do not see where sport hunting is a big deal. When I shoot a duck, I am not helping to increase the population. It does have an effect on the population. It decreases it. That is what I am trying to do.

Mr. BOWMAN. I would not argue with that. There are a number of groups and individuals around the country that thought that that was an unwarranted listing under the circumstances.

Mr. BREAUX. Do you object to overutilization for commercial or scientific or educational purposes being looked at in determining whether a species is endangered or threatened as a result of one of those factors?

Mr. BOWMAN. No. We did not feel that sport hunting was a cause of endangerment. Poaching, maybe. The establishment of a hunting season—

Mr. BREAUX. This is not a statement that sporting is a reason for it. It is just telling the Secretary to consider it. And you can make a very positive statement that in fact duck hunting is not threatening waterfowl in this country. You are saying that he should not even consider that. Is that what you are saying?

Mr. BOWMAN. Yes, sir. We believe that under current management programs if there is a season set there is no way you could justifiably claim that is contributing to the endangerment of the species.

Mr. BREAUX. Suppose somebody shoots 10 times the bag limit.

Mr. BOWMAN. Poaching is another matter. We are concerned about sport hunting.

Mr. BREAUX. I do not see how we can consider commercial or scientific or educational taking but not sporting. You can make an af-

firmative decision that sport hunting is not harming it at all and the management programs associated with the sporting season is encouraging additional population growth because of habitat. I do not understand how you can say it should even be considered. We can decide that later.

Let us move on to something else. Mr. Boynton, page 7. It is related to the issue, Mr. Boynton, that if a State has a management plan for a resident species that that management plan would be accepted evidence that that species is not put in detriment by a taking. You add the words that under a qualified State management program. Who would determine whether a State management plan for a resident species would be qualified or not?

Mr. BOYNTON. Mr. Chairman, I have no quarrel with the suggestion made by the International on that. The qualified management plan was open-ended in testimony. But the suggestion which I have reviewed that the International made would be acceptable. There would be a presumption that the State management program would be acceptable, and if after review it was found not to be, and I use the word unless it was found to be arbitrary and capricious, it would be overturned. That was basically the same concept the International proposed.

Mr. BREAUX. The plan has the legal ability or standing to be challenged by the Secretary of the Interior if he upon review decided that this plan was not an acceptable plan and did not meet criteria. He could say "we feel this plan is not an acceptable plan, therefore it cannot be used for determining that the taking under the plan not detrimental to that species"?

Mr. BOYNTON. That is correct.

Mr. BREAUX. On page 9 of your testimony you talk about this import/export licensing and all of the requirements that must be followed through as a result of the licensing procedure and the data that is collected. What you are telling me is this data is being required on species that are not threatened or endangered?

Mr. BOYNTON. The regulation goes to the export and import of all wildlife and the data derived. For example, if an exporter out of New York exports red fox skins, it will show that over a period of 12 months he exported 2,300 red fox skins, which tells absolutely nothing. We do not know where those skins came from; they did not certainly come from the State of New York. Nor do we know what year they were taken, so the data that is compiled—and this has been confirmed in conversations with members of law enforcement—has no application.

The only reason that we can find that has been satisfactory from the Fish and Wildlife Service is that law enforcement feels they need this type of regulation in that they can investigate, identify the importers and exporters of all wildlife, and they can investigate short of warrant the records of those entities. Certainly there should be under section 7 regulations on the import and export of domestic endangered and threatened species and under CITES, but we see no reason to do this on all wildlife.

Mr. BREAUX. Is that information required by the export/import license program used by the scientific authority in any way?

Mr. JACHOWSKI. Generally not. It is not as specific as we require for our findings.

Mr. BREAU. So you are saying, Mr. Boynton, that you are not sure what the information is used for. It is not used to determine the condition of a particular species?

Mr. BOYNTON. That is correct, not only for Federal use, but if that information were asked for by the States, it would have no benefit to them. It has just caused market disruption to trappers throughout the United States without material benefit.

Mr. BREAU. Mr. Grandy, we talked about the listing of species, particularly the listing associated with the bobcats when the cats were listed by CITES. When they made that listing, what scientific procedure did they use in listing the bobcats? Did they use the population estimate theory, or did they follow the population-trend type of estimate?

Mr. GRANDY. I was not there, Mr. Chairman. However, from direct knowledge and to my understanding, they listed the species for the reasons that I presented in my testimony, as a member of what was at that time called, and still is of course, a higher taxa. In effect they listed all the unlisted cats of the world because with our original prohibition, that is the original listings, of things like ocelots, margays, jaguars, leopards, and others, the importing nations in Europe were showing massive increases in the amount of import and manufacture of bobcat and lynx for sale in the European fur salons. The logic was that as a result of protecting the jaguar, the leopard, the ocelot, and others, that there was a massive amount of pressure coming on these now unprotected cats. That is why they were listed at that time.

Mr. BREAU. It sounds like they followed the theory that population trends are acceptable to determine the condition of a species.

Mr. GRANDY. I might point out as a matter of fact, Mr. Chairman, that it is easier to get an animal onto the CITES appendices than to get one off, because the purpose of the convention is to give the benefit of the doubt to the species listed. If we err, we ought to err on the side of giving protection to the species. It may well be that the criteria allow one to get an animal on with population trend information, but as a matter of fact the Berne criteria specifically require a documented population survey before protection is denied an animal.

Mr. BREAU. Are you saying with regard to the listing of cats that they just noticed an increase in the trade in cat pelts and therefore listed cats as appendix II, not knowing what the condition or the numbers of the cats were? Perhaps you could show a lot of trade in sparrows, but we might have trillions of sparrows.

Mr. GRANDY. That is probably true, but there is not a lot of trade in sparrows.

Mr. BREAU. Bluebirds or whatever we might have a lot of. The point is, that just because you have a lot of trade does not indicate that you have a threatened species.

Mr. GRANDY. That is correct, Mr. Chairman. But you will recall the standards for protection under CITES are not that the animal has to be threatened, but that it may become so if high volumes of trade are occurring and if that trade is not carefully controlled. And that is the standard for protection under the CITES treaty, and that is a standard and a place that the bobcat clearly fit into in 1976, and indeed still fits into today.

Mr. BREAUX. I feel like I am almost making your argument on the other side. In listing all of the cats should you not know something about how many cats we have, along with how many are traded?

Mr. GRANDY. We knew something about how many we had. At just about the time of listing I was executive vice-president of Defenders of Wildlife. We began a survey which ultimately resulted in having us petition in the Interior Department under the Endangered Species Act to have the bobcat listed as threatened or endangered in this country. So to say that there was no information in late 1976 about what the status of the bobcat population was, is not so. We did have some information. We certainly had sufficient information to warrant grave concern and to justify its listing under CITES.

Mr. BREAUX. Mr. Jachowski, when the cats were listed at CITES on appendix II, was information presented on the number of cats that we had?

Mr. JACHOWSKI. No, it was not. At Berne, Switzerland, in 1976, at the first conference of the parties, the listing of all of the cats that were not already listed was accomplished with about a two-paragraph statement from the United Kingdom explaining the rationale for extending this coverage to all of them.

Mr. BREAUX. Did the United States agree with that?

Mr. JACHOWSKI. Yes, at that time. At that time we had no Endangered Species Scientific Authority in operation, and very little concept of where such listings would lead us.

Mr. BREAUX. So the U.S. Government agreed to a two-page summary. The summary might have been the entire amount of information that the presenting country had concerning the question of whether we should list cats?

Mr. JACHOWSKI. That was all that was presented; yes, sir.

Mr. BREAUX. Would that be your Department's position today?

Mr. JACHOWSKI. I doubt it. In fact I should add that following the Berne conference the United States had gotten the other parties to agree that future proposals to amend the appendices should contain certain types of information. A format for proposals was adopted at the next meeting. Berne criteria, that you have probably heard of, were also a U.S. initiative back in 1976 to which the parties agreed. The criteria are written fairly broadly, so that population trend information, evidence of high volume of trade, and other sorts of indications of current or potential threat could be used to substantiate listings.

Mr. BREAUX. What you are telling me is that there might be other information—as Mr. Grandy says—that was available on the condition of cats, but what was presented was two pages saying that we ought to list the cats?

Mr. JACHOWSKI. What was presented I think was two short paragraphs, less than two pages.

Mr. BREAUX. And that you listed the cats all over the world?

Mr. JACHOWSKI. Correct. All species except the house cat and species that were already included in appendix I were to be included in appendix II.

Mr. BREAUX. Was scientific information presented on trends of house cats to get them exempted?

Mr. JACHOWSKI. No. In fact, one group in San Jose thought that house cats should be covered because of the difficulty in telling pelts from those of other cats.

Mr. BREAUX. To take cats off that list will require more than two paragraphs?

Mr. JACHOWSKI. At Berne the parties adopted delisting criteria which are considerably more rigorous than those for listing.

Mr. BREAUX. Mr. Forsythe.

Mr. FORSYTHE. Thank you, Mr. Chairman.

Again, Mr. Grandy, what is the name of that book that you tell us has the information how to count these cats?

Mr. GRANDY. It is the Wildlife Management Techniques Manual, the fourth edition, put out by the Wildlife Society, which is the professional society of most of the wildlife managers in America.

Mr. FORSYTHE. When was it first published?

Mr. GRANDY. There have been various editions. This most recent edition was published in 1980. The one prior to that was published as I recall in 1970. They try to get one out every 10 years or so.

Mr. FORSYTHE. Mr. Jachowski, are you aware of that document?

Mr. JACHOWSKI. We are. We make reference to it, as do the State biologists that we deal with.

Mr. FORSYTHE. Are you sufficiently aware to comment on the viability of the guidelines there for the population analysis or estimates?

Mr. JACHOWSKI. I am not a population biologist myself. I cannot answer some of the details about it. The business of estimating populations is not new, obviously. It has been done with varying degrees of reliability for many species. It is not clear as to just how much precision it is going to take to satisfy the court. Another point worth raising is that presently bobcat populations generally are not managed on the basis of estimates of total population size.

Mr. FORSYTHE. That was rather clearly said by the previous panel, that you cannot even find them. I happen to have been much involved for several months now in another population dynamics problem with fish. It is complicated, I fully agree, and I was just wondering how much in depth this whole measure has been reviewed, studied in the Department, the Fish and Wildlife Service, rather. You say it is consulted, but it is certainly not the bible yet.

Mr. JACHOWSKI. It is about as close to it as the profession has, but it is far from being the gospel.

Mr. FORSYTHE. Would you say, and I want to go back to Mr. Grandy with this same proposition, that there may well be specific animals where it is far more difficult and therefore the guidelines unless they are directed at a specific animal may not be adequate to arrive at a reliable population estimate?

Mr. JACHOWSKI. Obviously from the example on alligators, some animals are much easier to census or estimate population size on than others, and the bobcat because of its secrecy is one of those that is difficult.

Mr. FORSYTHE. How would you respond to that, Mr. Grandy?

Mr. GRANDY. Could you repeat the question, please.

Mr. FORSYTHE. That there are some species, perhaps bobcats in particular, that present certain problems in terms of population estimates.

Mr. GRANDY. A bobcat is not one of the easier ones, but the problem insofar as the court decision is concerned, and this specific instance is concerned, is being, for whatever reasons, highly overblown. The basic way that managers go about counting populations is just the way the man at the end of the table was describing counting alligators. You make a survey and get some sort of estimate of density, and you multiply the density estimate by the amount of area that you have and then you make sure that the estimate so arrived at is low enough so that it represents a reliable minimum estimate of the population of animals that you are dealing with. Those are the kinds of techniques that are in here—The Manual. Indeed, many States in the United States have done estimates using this method. Congressman Breaux's own State at one point submitted some density estimates and population estimates. The State of Massachusetts has done so as well.

Mr. FORSYTHE. You are referring now specifically to bobcats?

Mr. GRANDY. That is correct. The State of Massachusetts and the State of Maine have both developed density estimates for their populations and have come up with population estimates. It is possible if the will is there. The problem at the moment is the following: That the Fish and Wildlife Service was presented with a court injunction in April 1981 where they were told that they were going to have to present guidelines on how they would use or analyze data that the States submitted. They never did that. They never said we will use your data this way or that. They never required specific types of data.

In September of this year, the Fish and Wildlife Service made a motion to have the injunction vacated. We went back to court and said no, do not vacate the injunction because the FWS had not complied with the terms of the injunction, and the court agreed and that is why we have the problem now. It is not that populations cannot be estimated. It is not that we cannot get reliable minimum estimates of population, but the Fish and Wildlife Service has yet to take the initiative and tell the States what is required. The result of that failure is precisely what we have today. The States are confused, the furriers are aggravated, and the Fish and Wildlife Service has come in saying gee whiz, bail us out.

Mr. FORSYTHE. Mr. Boynton.

Mr. BOYNTON. Would you like me to respond to that? I would be delighted to do so.

Mr. FORSYTHE. Yes.

Mr. BOYNTON. From what we have heard, the furriers are aggravated, the FWS is unhappy, the States are confused, and defenders are charging forth with the white flag on behalf of the bobcat. Poppycock. In no way are these population estimates necessary for proper wildlife management. We heard Dr. Crowe, who did his doctoral thesis on bobcat populations, and he testified in the court that such information was not needed. Every wildlife manager that has testified either in court or has submitted a paper on this question has said that population estimates are not needed for the proper management of bobcats.

Now, because this court decision has come down substituting judicial reasoning for wildlife management, the defenders are saying that is exactly what they wanted. I submit that is not what they

wanted. I think the case has gone further than even they wanted, because it jeopardizes all annual harvests. The chairman was talking about sparrows and bluebirds earlier, but we can take rabbits as an example, which have annual harvests. If you carry the logic of the court decision, the more numerous the population, the less likelihood you can establish a population. The same is true for mourning doves, waterfowl populations, or webless migratory birds. How are you going to have a population on woodcock? Congress has to address the need for the proper parameters of wildlife management, and not accept a judicial decision which is not based upon wildlife management, but based on another parameter which is clearly not necessary.

Mr. FORSYTHE. Is not the thrust of the question not just management, but whether the species is sufficiently in trouble that we need to protect it.

Mr. BOYNTON. You started your question, and then you hesitated. The word that you wanted was "managed." If properly managed it will not be endangered or threatened. The 33 States in the Navajo Nation that have bobcat populations, without exception, came forward and said we do not have a bobcat population that is threatened with endangerment. Every one that reviewed it in the U.S. Government agreed. The only one that has not agreed as far as a formal status, are the court systems, who are not the wildlife biologists.

I submit that the initial question is not whether it is endangered. The status is a byproduct of the management program. If the management program says no, "we do not believe the species is threatened with endangerment," I think that has to be accepted by the Federal Government, unless abused in some fashion which the Secretary can overrule. If it is managed, then we can go to the question of endangerment.

Mr. FORSYTHE. Mr. Bowman.

Mr. BOWMAN. I would add that the arguments put forth, that this requirement for reliable population data would be carried forward to other species, are not necessarily hypothetical. I was at a meeting on a proposed protocol to the Canadian migratory bird treaty a few weeks ago. The question of whether reliable population estimates of ducks were needed based on this decision were raised for certain issues totally removed from the ones now under consideration. It is not hypothetical. This is a precedent that goes far beyond bobcats.

The committee should also be aware that in many States, prior to the emergence of the bobcat as a fur animal, it was considered a predator, subject to the animal damage control programs. Continuation of the court decision will not benefit the bobcat because it will go off the management program and back to an animal damage control program. Only continuation of an active management program will serve both the interests of the trappers and of the bobcat.

Mr. FORSYTHE. Mr. Hoyt, you are involved as a trapper yourself.

Mr. HOYT. Yes. Two points that I would like to make.

One is, I agree with everybody else that says bobcats are hard to count. They are darn hard to count, but there is one thing that we have going for us because of harvest, and that is sustained yield. If

the State of Arizona harvested 8,000 bobcats last year and 8,000 the year before and they harvest 8,000 this year, we are not hurting those populations any, are we? The one thing that we have going for us and the one thing that is going to keep the bobcat from ever being in trouble is the fact that we have millions of square miles of inaccessible area which act as a huge reservoir, and the spillover from these inaccessible areas are what is feeding the accessible areas and the animals that are trapped every year. We will never run out of bobcats because there are too many millions of square miles with no access.

Mr. FORSYTHE. I thank the panel.

Thank you, Mr. Chairman.

Mr. BREAU. If it had not been for all of the money, time, and effort that has been spent on this issue going all the way up through the various courts and ultimately to the Supreme Court, an innocent bystander could almost look at this and say it is a lot to do about nothing. We are talking about the same thing. I do not think the various groups are that far apart. Dr. Crowe outlined a series of five steps that the State of Wyoming went through to determine a management program for bobcats, and that is labeled as population trend, and, Mr. Grandy, your organization would say that a count is not necessary. We are not insisting that you count the number of species, but we do not accept as reliable this population trend theory.

What if in addition to the steps that Dr. Crowe outlined when he talked about looking at the number of license holders, the number of animals harvested, the location of the harvest, effort expended to harvest an animal, the age and the sex ratios of the harvested animals, and threw out a number and said this is what I think the evidence indicates to me. Is it still deficient, and if so, what else would you require?

Mr. GRANDY. He does what?

Mr. BREAU. All the five steps I just enumerated which is part of the Wyoming program for managing bobcats. He says based on this I think the population count is x number.

Mr. GRANDY. You would want to know the confidence which you could apply as a matter of science to the population estimates so generated, and one very important thing that I mentioned in my testimony, and that we have not discussed here, is that you want a ceiling, a limit on the number that may be killed, as the court required. Many States do not even have a limit on total annual kill of bobcats.

Mr. BREAU. They would have when they would have the bag limit, would they not?

Mr. GRANDY. No. Bag limit generally refers to the number that may be killed per person per day, or it may refer to the number per person per season. It varies somewhat, but bag limit is usually the number per person per day. However, having a bag limit is not the same as having an annual limit on total kill in a State.

Mr. BREAU. You know how many trappers you have because you issue each one a license and then you say each one of you have a license and can take so many. Then you multiply and come out in theory with the number that could be taken.

Mr. GRANDY. The maximum number. You could either build your management program to take that into account and put a ceiling on it there or somewhere else based on the size of population that you estimated.

Mr. BREAUX. If that is done, is that not sufficient? What else is needed?

Mr. GRANDY. That is about what we have suggested all along would be sufficient. The things that you are saying, Mr. Chairman, for example, those five factors which you gave us, when we proposed guidelines to the U.S. Fish and Wildlife Service, we asked them to figure out how to take those things into account in developing the population estimate which Dr. Crowe said you could get from those things. What you are suggesting is, I repeat, similar to what we have suggested; and my feeling is very strongly that all the Fish and Wildlife Service has to do at this point is go back and do those guidelines and this whole thing can be resolved, and all the expense and everything else can be avoided.

Mr. BREAUX. Suppose they use these five steps and they say all right, based on this information, we think the population is such and such, and they set a specific limit on the take. We have a specific number of licenses issued—no more.

Mr. GRANDY. Yes?

Mr. BREAUX. If you disagreed with that, what would you use to challenge it? Say they say the population of the bobcat based on this is 500,000. You say I do not agree with that. Do you go out and count them to say that we have less than that, or what would you use?

Mr. GRANDY. As you know, I am a professional biologist. I would look at the data and check the limits and see if I thought they had enough bobcats to sustain the kill that would be permitted.

Mr. BREAUX. The factors that you would look at would be the ones that we talk about?

Mr. GRANDY. Those or perhaps others. The ones that Dr. Crowe suggested are not uniformly used by all States. Some use certain factors, some use others, but they have to be built into a set of guidelines so the public can tell how they are being used to arrive at the population estimates which are being generated. I would just do that. I would look at the data that was compiled and I would use the computer theory, garbage in, garbage out, or good data in, good data out, and go from there.

Mr. BREAUX. Mr. Boynton, your interpretation of what the court decision is telling wildlife groups throughout the United States is with relation to Dr. Crowe's suggestions on what they consider in Wyoming in determining a management plan for the bobcat. Would that be sufficient under how you view the court decision? Or would the court decision in your opinion be requiring much more?

Mr. BOYNTON. The problem is, Mr. Chairman, that determination of reliable populations is a subjective determination, and whatever data produced by the criteria that Dr. Crowe came up with may be subject to challenge saying: "No, I do not think this is enough, we need three more trees to be covered as far as habitat is concerned." Consequently, it would always open it to challenge. That criteria is not new, it was presented in court, and the court rejected it.

Mr. BREAU. This criteria was not accompanied with a population estimate? They had all this information and set the season, but they did not say based on this we think the population is x amount?

Mr. BOYNTON. I believe Dr. Crowe testified that you can determine a population estimate from that data, although he does not believe that is a primary level of criteria that you need. He looks at the trends. My problem with the court decision is that it is always going to be subjective and, therefore, subject to challenge if you have that as one of the primary concerns: that you must have reliable population estimates. I have heard testimony from wildlife biologists who say we do not know what that means. When is "enough enough?" If you put that back as one of the criteria that will be used along with other information that is derived from harvest data such as the sex, location, how many pups are born, you can derive an estimate and put it on a plane with other data. For example, weather may be a factor in one State and not another. You cannot have that as the main one, because it will always be subject to challenge.

Mr. BREAU. Would people agree that it would be possible to pick a number? You do not have a lot of confidence in the number, but you could pick a number and say "based on these things that we have looked at we think the population of the bobcat is x "?

Mr. BOYNTON. With the caveat that Dr. Crowe gave, yes, we could find a number, but I do not think that number has a great deal of relevance.

Mr. BREAU. Dr. Grandy, what is your comment on what Mr. Boynton was saying about using these five criteria and predicting a number based on the criteria?

Mr. GRANDY. That would depend on the way you used them, and as I said earlier, the data that you put into it. There are other criteria as Dr. Crowe knows that could be used. You can use those five, you can use other kinds of information, track counts and things, but on the basis of what goes will you decide how good the population estimate is that comes out the other end. There is not an ironclad rule for that.

Mr. BREAU. Isn't the formulating of an estimate of the population of any species continually open for challenge by both sides? Are we just legislatively or judicially saying "look, no matter what management program we are going to deal with here, you are going to have somebody challenging it"?

Mr. GRANDY. The defense against that, Mr. Chairman—and I am not speaking on behalf of the organizations that I represent particularly, but as one that has wandered around courts for a number of years—is for the agency to administratively adopt after notice and comment guidelines for using the information, and they will tell you out in front what information will be adequate and what will not. That as I have said a couple of times is not what was done last year. If it had been done, I think I can predict fairly accurately that the suit would not have been brought this year, or at least if it had it certainly would not have had the results that it has had.

Mr. BREAU. What specifically do you or the organizations that you represent object to in the way the population trends, if these regulations were adopted and presented?

Mr. GRANDY. What we object to is that the court of appeals decision was not complied with. Guidelines concerning how information would be used were not promulgated. As a result, the States not at their own fault, particularly, turned in the best data they had; but it all ended up looking like, frankly, a hodgepodge, because the Fish and Wildlife Service did not tell them what was required or what they needed, and how they would use the data that they got.

Mr. BREAUX. Is it your opinion that on every species we have some kind of management plan on a State or Federal level that has a number estimate of the population? Would such a plan be deficient without such a number?

Mr. GRANDY. I think that would depend on what the plan was for, frankly. Let me explain that. I am not avoiding the question. In relation to a highly exploited species which has a fairly low reproductive rate like the bobcat in heavy trade, it is our judgment that you cannot rely on indirect measures to safeguard or to insure the safety of the population. So if we are talking about a heavily exploited species like the bobcat, it would seem to me that you would have to have a population estimate and a ceiling on the number that could be killed. But if you are talking—

Mr. BREAUX. The ceiling does not seem to be a problem. I think every State with a management plan has a taking limit or a bag limit, do they not?

Mr. GRANDY. They may have a bag limit, but that is not a ceiling on the number that may be killed during the year, and that is specifically what they need. So if you have a heavily exploited species like the bobcat, you are going to need a ceiling. If you have a species which is not subject to heavy exploitation, then a management plan for that species does not require the accuracy or sophistication that you are required to have in one where you are in effect continually pushing the limit. And that is the situation that faced us, I should point out, in the late 1970's, where the bobcat pelt prices had gone up in some cases fiftyfold, seventyfold. The number of trappers hitting the woods after bobcats had gone up two, three times, four times.

Mr. BREAUX. Apparently no evidence whatsoever was presented to the CITES on the numbers or the estimate of the numbers of cats?

Mr. GRANDY. Actually, I wanted to say something earlier when Dr. Jachowski was speaking in relation to that. The whole cat proposal was subject to days and days of hearings and committee meetings at the meeting of the parties in Berne. I do not know what the paper documentation was for it, but I know there was a lot of discussion relative to the status of cats worldwide, and as I said earlier, Defenders of Wildlife did petition the Fish and Wildlife Service to have the bobcat in this country listed as an endangered or threatened species. That petition was accepted in 1977 by the Fish and Wildlife Service. However, for the same political reasons that you are seeing in operation today, they have never acted on it, even though they concluded in 1977 that it presented substantial evidence.

Mr. BREAUX. Mr. Boynton, do you have a comment?

Mr. BOYNTON. I have documents that I would be happy to supply to the committee, the documents that were reviewed in Berne. I quote one paragraph in my formal testimony. It may have been subject to discussion, but I do not believe the supporting documents of the United Kingdom proposal contained anything to do with populations other than the horror that there was a lot of trade in this, therefore, they must be threatened. I would be happy to submit that for the committee.

Mr. BREAU. I think this has been an interesting discussion. It goes to the heart of one of the things that this committee is looking at with regard to the authorization of the Endangered Species Act. I think that the discussion has been very helpful. It clearly shows the two differences of opinion on this issue which is something that we need to take a careful look at.

The committee will now recess, and will come back to take the remaining panels that we have this afternoon at 2 p.m. in this room.

[Whereupon, at 1 p.m., the subcommittee recessed, to reconvene at 2 p.m., the same day.]

AFTERNOON SESSION

Mr. BREAU. The committee will please be in order.

This afternoon we will have our third panel addressing international issues.

We would like to welcome at this time Mr. Curtis Bohlen, who will present Mr. Russell Train's statement on behalf of the World Wildlife Fund; Mr. Marshall Meyers, general counsel, Pet Industry Joint Advisory Council; Gerson Lieber, president, Reptile Users Association, and Duane Smelser, president, Safari Club.

Gentlemen, we welcome you and are pleased to receive your testimony.

We have you at the top of the list. Why not go ahead and start.

STATEMENTS OF CURTIS BOHLEN, VICE PRESIDENT, WORLD WILDLIFE FUND; MARSHALL MEYERS, GENERAL COUNSEL, PET INDUSTRY JOINT ADVISORY COUNCIL; GERSON LIEBER, PRESIDENT, REPTILE USERS ASSOCIATION, AND DUANE SMELSER, PRESIDENT, SAFARI CLUB

Mr. BOHLEN. Thank you, Mr. Chairman.

My name is Curtis Bohlen, vice president of World Wildlife Fund. I am reading testimony for our president, Russell Train, who regrets exceedingly that he cannot be here. He is involved in wreath-laying ceremonies at the Washington Monument today.

Mr. Chairman and members of the committee, it is a pleasure to appear before you today to testify on the role of the United States in the international conservation of endangered animals and plants and their ecosystems.

The accelerating loss of global biological diversity was the subject of a strategy conference at the Department of State in November 1981. At that conference Under Secretary of State James L. Buckley stated:

By permitting high rates of extinction to continue, we are limiting the potential growth of biological knowledge. In essence, the process is tantamount to book-burning, but it is even worse in that it involves books yet to be deciphered and read.

If Secretary Buckley's views were more widely appreciated, my testimony would be shorter.

The subcommittee has asked me to address some of the international aspects of the Endangered Species Act, and the bulk of my testimony is devoted to that subject. However, I believe it appropriate to preface those remarks by noting my belief that the Endangered Species Act is the most important wildlife conservation law in the United States and probably in the world.

World Wildlife Fund's experience with various projects in other countries has provided us with frequent opportunity to observe the perceptions of the U.S. Endangered Species Act held by other nations and conservationists throughout the world. There is no doubt that the United States is seen as a world leader in the conservation of endangered species, and that our commitment to the act has, by example and through the international cooperation it authorizes, led others to advances in conservation that otherwise would have been foregone.

The foundation of U.S. effectiveness internationally is the strength of our commitment at home. Nothing could damage more our contribution to the worldwide protection of endangered animals and plants than to weaken the protection now available for our own endangered living resources. I emphasize this because proposals have been made which would not simply weaken the Endangered Species Act but, in my judgment, virtually destroy it.

I refer in particular to proposals that would lessen the obligation of Federal agencies under section 7 to protect endangered and threatened species and to proposals that would eliminate certain life forms from any protection under the act. I regard these proposals as tantamount to a repeal of the act and I stand squarely against them.

World Wildlife Fund-United States is engaged in many international efforts to understand and to conserve endangered species. The green sea turtle in the Pacific Ocean and the peregrine falcon of the Eastern United States are but two examples of the many endangered species for whom national boundaries have no meaning and which have been and are being helped not only by international organizations such as ourselves, but by our own and other governments. Increasingly, as natural areas shrink, the Fund focuses on ecosystems conservation.

In our own hemisphere, we have assisted in the planning and management of areas such as Panama's Darien Frontier National Park, Honduras' Rio Platano Biosphere Reserve, Ecuador's Galapagos Islands, and the parks and reserve systems of Costa Rica and Brazil, to name a few. These areas are not only essential to the survival of hundreds of thousands of wild plants and animal species, but as watersheds vital to human livelihood.

The provisions of the act that pertain directly to international conservation are critically important and must not be compromised. For example, section 4 of the act mandates the listing of any species, foreign or domestic, that are endangered or threatened. Listing foreign species has multiple conservation benefits, includ-

ing the fact that it may make available excess foreign currencies to assist foreign countries with conservation programs. It also affects and guides the field research of many American universities and the voluntary efforts of private conservation organizations both here and abroad.

In developing countries with few resources for assessment of the status of species, listing by the United States has brought international attention to species and ecosystems in trouble, which has significantly aided their conservation.

The golden-lion tamarin in Brazil is one such species, severely endangered by loss of its native forest. Scientists from the United States are cooperating with Brazilian scientists in field work on this primate; the National Zoo maintains the principal captive breeding colony of the species and coordinates captive propagation activities throughout the world. World Wildlife Fund is embarking on a major campaign to help Brazilian authorities purchase privately owned lands that constitute this primate's last stronghold.

Like the great majority of species in danger of extinction, the golden-lion tamarin is jeopardized primarily by loss of habitat. However, we are reliably informed that the Interior Department has determined, as a matter of policy, to deemphasize the listing of foreign species and is reported to be seriously considering eliminating the protection of the act for species protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES]. As you know, however, CITES only addresses international trade. Although an extremely important tool in wildlife conservation, that treaty does not apply, and is not even designed to apply, to most species that are threatened with extinction.

Since 1978, the Secretary has had a duty to publish guidelines in the Federal Register which, among other things, establish a system for assigning priorities to the listing effort. Apparently that priority system has now been adopted, even though it has not been published in the Federal Register and there certainly has been no opportunity for public comment, although that too is required by the statute. Were the Secretary to make these guidelines available for public comment, I think he would have to reconsider giving low priority to foreign species and would abandon any suggestion of making CITES the sole source of protection for those species.

I believe that State wildlife agencies with their technical expertise could be of great assistance to the Interior Department in international conservation efforts for foreign species listed under the act. Consequently, I propose that section 8 of the act be amended to authorize the Secretary of the Interior, with the concurrence of the Secretary of State, to fund part or all of the expenses of such technical assistance provided through State agencies.

The remainder of this testimony concerns the two multilateral treaties that are implemented by the act, CITES and the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere. I will address the latter first.

The Western Hemisphere Convention was prepared in Washington by a committee of experts and opened for signature in 1940. It entered into force on May 1, 1942. The General Secretariat of the Organization of American States is the depository. Any member

country of the OAS may become a part; to date, 17 countries have ratified.

This convention addresses the preservation of natural areas and certain species of animals and plants. Parties are to establish national parks, national reserves, nature monuments, and strict wilderness reserve—article II. Regarding the protection of species, the convention parties agree to adopt, or to propose for adoption, laws for the protection of plants and animals outside protected areas—article V, paragraph 1. Parties are to adopt appropriate measures for the protection of migratory birds—article VII and to protect strictly those animal and plant species listed in the annex to the convention—article VIII. The parties generally agree to cooperate and to assist each other in accomplishing the objectives of the convention.

The OAS sponsored five technical meetings on implementation of the convention in 1977, 1978, and 1979, culminating in a meeting on legal aspects of the treaty. These meetings revealed that the convention has served as a useful framework for cooperation on nature conservation in the Americas. However, the meetings have also made clear that most parties have not fully implemented the treaty and have not uniformly shared with other parties the actions which they have taken.

The United States, for example, has not fully pursued the provisions of the convention concerning the protection of plants and migratory birds. Whereas State wildlife agencies in our country regulate the taking of most animal species, and the Federal Government regulates the taking of migratory birds, there is no widely adopted regulatory counterpart in the United States for the protection of plants. Yet article V of the convention calls for regimes to protect plants from excessive taking, and article VIII virtually prohibits taking plants of species listed in the convention annex.

Equally significant is our failure to have negotiated migratory bird agreements with any party other than Mexico. World Wildlife Fund-United States has for several years been investigating migratory birds in the New World Tropics, in part as a contractor for the U.S. Fish and Wildlife Service.

One-half of U.S. birds—322 species—winter in the neotropics and spend at least half their lives there. Some scientists believe that U.S. breeding populations of these migrants are declining and that in several cases the decline is probably caused by destruction of wintering habitat. Some number of these species is shared with every country southward of the United States, including all parties to the convention.

The United States should cooperate with these countries to determine the conservation needs of shared migratory bird species and the desirability of more formal joint commitments to the conservation of these species. Unless we address this problem now under the rubric of the Western Hemisphere Convention, we may later have to address it under other provisions of the Endangered Species Act. We must accept the biological reality that our migratory birds constitute an internationally shared resource that can only be protected through international cooperation in policy formulation, research, and management.

I believe that this committee should take several immediate steps to improve implementation of the Western Hemisphere Convention.

First, the Secretary of the Interior and the Secretary of State should be directed to submit to the Congress within 1 year a report describing the status of U.S. actions to implement the convention and identifying additional actions to comply more fully with our obligations, including those concerning the conservation of plants and migratory birds as discussed previously. These proposals should also address the recommendations of the five technical meetings and should include specific budgetary commitments.

Second, the Secretary of State should be directed to use his good offices with the Organization of American States to bring about within 3 years a meeting of representatives of the convention parties. At this meeting, the representatives should review the reports of the five technical meetings and should develop proposals to their governments for better implementation of the convention, including, as appropriate, specific agreements on matters addressed more generally in the convention.

Reportedly the President is soon to unveil his new Caribbean plan in which the United States will commit itself to the development of the island nations of the Western Hemisphere. The recommendations I make here should facilitate the integration of conservation and development in this important region.

Last, but not least, the committee should use its best efforts to enhance the funding and personnel levels of the International Affairs Offices in the U.S. Fish and Wildlife Service and the National Park Service.

The fiscal year 1983 budget just proposed for the National Park Service's international office is \$277,000, down 22 percent from fiscal year 1982. The 1983 budget for the Fish and Wildlife Service's Office of International Affairs has not been released. These offices are the mainstay of U.S. participation in this convention as well as in other important international obligations such as the Convention Concerning the Protection of the World Cultural and Natural Heritage. Most of these funds are used for salaries; travel costs and many other expenses often have been borne by AID, other countries, and nongovernmental organizations such as World Wildlife Fund United States. The work of these offices represents an efficient investment of the taxpayers' dollars. If we are to rise to the challenge of our yet unmet responsibilities under the Western Hemisphere Convention and other laws, then we must raise, not decrease, our support for these offices most critical to the job.

Plans are the subject of my final comments on CITES. Article VIII, paragraphs 6 and 7 of CITES require parties to file annual reports on trade in species on the appendixes. These reports must summarize the number and type of permits and certificates granted; the states with which such trade occurred; the numbers of quantities and types of specimens, names of species as included in appendixes I, II, and III and, where applicable, the size and sex of the specimens in question, article VIII.6(b).

The U.S. Fish and Wildlife Service has carried out this function for the United States with generally improving efficiency in reporting animal trade. Efforts to automate reporting have helped and

will be a great aid if completed and not dropped because of a short-sighted vision of fiscal priority. The situation for plants, however, has been puzzling, because the Service has neither reported trade in species of plants nor acknowledged that such reporting is required by CITES.

The current and, we are led to believe, prospective reporting of plant trade is by family and of little value to conservation because of the enormous variation in status of species within families, such as the cactus family. The criticism drawn today by CITES rests heavily on discontent with the listing of an entire family of organisms—in this case, cats—without evaluating the needs of each species. Let us not continue down this path by failing to consider the needs of plant species once listed.

In the various ways I have described, the implementation of the Endangered Species Act could be improved to enhance the effectiveness of international conservation efforts. The suggestions I have made are intended to serve as careful refinements to a statute that has been singularly important and singularly effective in the preservation of biological diversity.

As I noted at the outset, there are proposals which have been put forth, including many you will hear on the second day of these hearings, that do not represent an effort to refine this act, but rather to bludgeon it. If adopted, those proposals would set back our conservation efforts by a decade or more. Because setbacks of that magnitude today will result in the irreversible loss of many species, I place myself unwaveringly against them. I hope this committee will do the same.

Finally, I would like to offer a suggestion which I hope you will take seriously. Endangered species, like wilderness areas, are irreplaceable. Once lost, they are gone forever. The sacrifice of endangered species and their habitats, like the sacrifice of wilderness areas, should be a last resort, something we countenance only when we determine that our national needs absolutely compel it.

Fortunately, the preservation of endangered species, like the preservation of wilderness, imposes a very small economic impact upon our society. The energy and mineral wealth in our wilderness areas represents in all likelihood a tiny percentage of the energy and mineral wealth available to us. Similarly, the number of Federal activities that have been impeded by section 7 of the Endangered Species Act represents an even tinier proportion of the Federal activities that have been reviewed under section 7.

My suggestion, therefore, is that we continue the protection of endangered species and their habitats under section 7 as it stands today, at least through the end of this century. If we determine then that we really must extirpate a rare species and destroy its habitat, we can do so.

I frankly think, however, that we can preserve our endangered species and live comfortably with this act well into the next century.

Thank you.

Mr. BREAU. Thank you.

[Statement of Mr. Train follows:]

STATEMENT OF RUSSELL E. TRAIN, PRESIDENT, WORLD WILDLIFE FUND-U.S.¹

Mr. Chairman and members of the committee, it is a pleasure to appear before you today to testify on the role of the United States in the international conservation of endangered animals and plants and their ecosystems.

The accelerating loss of global biological diversity was the subject of a strategy conference at the Department of State in November, 1981. At that conference, Under Secretary of State James L. Buckley stated: "By permitting high rates of extinction to continue, we are limiting the potential growth of biological knowledge. In essence, the process is tantamount to book-burning; but it is even worse, in that it involves books yet to be deciphered and read." If Secretary Buckley's views were more widely appreciated, my testimony would be much shorter.

The subcommittee has asked me to address some of the international aspects of the Endangered Species Act, and the bulk of my testimony is devoted to that subject. However, I believe it appropriate to preface those remarks by noting my belief that the Endangered Species Act is the most important wildlife conservation law in the United States and probably in the world. World Wildlife Fund's experience with various projects in other countries has provided us with frequent opportunity to observe the perceptions of the U.S. Endangered Species Act held by other nations and conservationists throughout the world. There is no doubt that the United States is seen as a world leader in the conservation of endangered species and that our commitment to the Act has, by example and through the international cooperation it authorizes, led others to advances in conservation that otherwise would have been foregone.

The foundation of U.S. effectiveness internationally is the strength of our commitment at home. Nothing could damage more our contribution to the worldwide protection of endangered animals and plants than to weaken the protection now available for our own endangered living resources. I emphasize this because proposals have been made which would not simply weaken the Endangered Species Act but, in my judgment, virtually destroy it. I refer in particular to proposals that would lessen the obligation of federal agencies under Section 7 to protect endangered and threatened species and to proposals that would eliminate certain life forms from any protection under the Act. I regard these proposals as tantamount to a repeal of the Act and I stand squarely against them.

World Wildlife Fund-U.S. is engaged in many international efforts to understand and to conserve endangered species. The green sea turtle in the Pacific Ocean and the peregrine falcon of the eastern United States are but two examples of the many endangered species for whom national boundaries have no meaning and which have been and are being helped not only by organizations such as ourselves but by our own and other governments. Increasingly, as natural areas shrink, the Fund focuses on ecosystems conservation. In our own hemisphere, we have assisted in the planning and management of areas such as Panama's Darien Frontier National Park, Honduras Rio Platano Biosphere Reserve, Ecuador's Galapagos Islands and the parks and reserve systems of Costa Rica and Brazil, to name a few. These areas are not only essential to the survival of hundreds of thousands of wild plant and animal species but as watersheds vital to human livelihood.

The provisions of the Act that pertain directly to international conservation are critically important and must not be compromised. For example, section 4 of the Act mandates the listing of any species, foreign or domestic, that are endangered or threatened. Listing foreign species has multiple conservation benefits, including the fact that it may make available excess foreign currencies to assist foreign countries with conservation programs. It also affects and guides the field research of many American universities and the voluntary efforts of private conservation organizations both here and abroad.

In developing countries with few resources for assessment of the status of species, listing by the United States has brought international attention to species and ecosystems in trouble which has significantly aided their conservation. The golden-lion tamarin in Brazil is one such species, severely endangered by loss of its native forest. Scientists from the United States are cooperating with Brazilian scientists in field work on this primate; the National Zoo maintains the principal captive breeding colony of the species and coordinates captive propagation activities throughout the world. World Wildlife Fund is embarking on a major campaign to help Brazilian

¹ Vice President, International Union for the Conservation of Nature and Natural Resources; former Administrator, Environmental Protection Agency (1973-1977); former Chairman, Council on Environmental Quality (1970-1973); Chairman, U.S. Delegation to the Plenipotentiary Conference to Conclude an International Convention on Trade in Certain Species of Wildlife (1973).

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authorities purchase privately-owned lands that constitute this primate's last stronghold.

Like the great majority of species in danger of extinction, the golden-lion tamarin is jeopardized primarily by loss of habitat. However, we are reliably informed that the Interior Department has determined, as a matter of policy, to deemphasize the listing of foreign species and is reported to be seriously considering eliminating the protection of the Act for species protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). As you know, however, CITES only addresses international trade. Although an extremely important tool in wildlife conservation, that treaty does not apply, and is not even designed to apply, to most species that are threatened with extinction.

Since 1978, the Secretary has had a duty to publish guidelines in the Federal Register which, among other things, establish a system for assigning priorities to the listing effort. Apparently that priority system has now been adopted, even though it has not been published in the Federal Register and there certainly has been no opportunity for public comment, although that too is required by the statute. Were the Secretary to make these guidelines available for public comment, I think he would have to reconsider giving low priority to foreign species and would abandon any suggestion of making CITES the sole source of protection for those species.

I believe that state wildlife agencies with their technical expertise could be of great assistance to the Interior Department in international conservation efforts for foreign species listed under the Act. Consequently, I propose that section 8 of the Act be amended to authorize the Secretary of the Interior, with the concurrence of the Secretary of State, to fund part or all of the expense of such technical assistance provided through state agencies.

The remainder of this testimony concerns the two multilateral treaties that are implemented by the Act: CITES and the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere. I will address the latter first.

The Western Hemisphere Convention was prepared in Washington by a committee of experts and opened for signature in 1940. It entered into force on May 1, 1942. The General Secretariat of the Organization of American States is the depository. Any member country of the OAS may become a party; to date, 17 countries have ratified.²

This Convention addresses the preservation of natural areas and certain species of animals and plants. Parties are to establish national parks, national reserves, nature monuments, and strict wilderness reserves (Article II). Regarding the protection of species, the Convention parties agree to adopt, or to propose for adoption, laws for the protection of plants and animals outside protected areas (Article V, Par. 1). Parties are to adopt appropriate measures for the protection of migratory birds (Article VII) and to protect strictly those animal and plant species listed in the Annex to the Convention (Article VIII). The parties generally agree to cooperate and to assist each other in accomplishing the objectives of the Convention. The OAS sponsored five technical meetings on implementation of the Convention in 1977, '78 and '79, culminating in a meeting on legal aspects of the treaty. These meetings revealed that the Convention has served as a useful framework for cooperation on nature conservation in the Americas.

However, the meetings have also made clear that most parties have not fully implemented the treaty and have not uniformly shared with other parties the actions which they have taken. The United States, for example, has not fully pursued the provisions of the Convention concerning the protection of plants and migratory birds. Whereas state wildlife agencies in our country regulate the taking of most animal species, and the federal government regulates the taking of migratory birds, there is no widely adopted regulatory counterpart in the United States for the protection of plants. Yet Article V of the Convention calls for regimes to protect plants from excessive taking, and Article VIII virtually prohibits taking plants of species listed in the Convention Annex.

Equally significant is our failure to have negotiated migratory bird agreements with any party other than Mexico. World Wildlife Fund-U.S. has for several years been investigating migratory birds in the New World tropics, in part as a contractor for the U.S. Fish and Wildlife Service. One-half of U.S. birds (322 species) winter in the neotropics and spend at least half their lives there. Some scientists believe that U.S. breeding populations of these migrants are declining and that in several cases the decline is probably caused by destruction of wintering habitat. Some number of

² Argentina, Brazil, Costa Rica, Chile, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Mexico, Nicaragua, Panama, Peru, Trinidad and Tobago, United States of America, Uruguay and Venezuela.

these species is shared with every country southward of the United States, including all parties to the Convention. The United States should cooperate with these countries to determine the conservation needs of shared migratory bird species and the desirability of more formal joint commitments to the conservation of these species. Unless we address this problem now under the rubric of the Western Hemisphere Convention, we may later have to address it under other provisions of the Endangered Species Act. We must accept biological reality that "our" migratory birds constitute an internationally shared resource that can only be protected through international cooperation in policy formulation, research and management.

I believe that this Committee should take several immediate steps to improve implementation of the Western Hemisphere Convention. First, the Secretary of the Interior and the Secretary of State should be directed to submit to the Congress within one year a report describing the status of U.S. actions to implement the Convention and identifying additional actions to comply more fully with our obligations, including those concerning the conservation of plants and migratory birds as discussed previously. These proposals should also address the recommendations of the five technical meetings and should include specific budgetary commitments.

Second, the Secretary of State should be directed to use his good offices with the Organization of American States to bring about within three years a meeting of representatives of the Convention parties. At this meeting, the representatives should review the reports of the five technical meetings and should develop proposals to their governments for better implementation of the Convention, including, as appropriate, specific agreements on matters addressed more generally in the Convention. Reportedly the President is soon to unveil his new "Caribbean Plan" in which the United States will commit itself to the development of the island nations of the Western Hemisphere. The recommendations I make here should facilitate the integration of conservation and development in this important region.

Last, but not least, the Committee should use its best efforts to enhance the funding and personnel levels of the international affairs offices in the U.S. Fish and Wildlife Service and the National Park Service. The fiscal year 1983 budget just proposed for the National Park Service's international office is \$277,000, down 22 percent from fiscal year 1982. The 1983 budget for the Fish and Wildlife Service's Office of International Affairs has not been released. These offices are the mainstay of U.S. participation in this Convention as well as in other important international obligations such as the Convention Concerning the Protection of the World Cultural and Natural Heritage. Most of these funds are used for salaries; travel costs and many other expenses often have been borne by A.I.D., other countries, and non-governmental organizations such as World Wildlife Fund-U.S. The work of these offices represents an efficient investment of the taxpayers' dollars. If we are to raise to the challenge of our yet unmet responsibilities under the Western Hemisphere Convention and other laws, then we must raise—not decrease—our support for these offices most critical to the job.

Plants are the subject of my final comments on CITES. Article VIII, paragraphs 6 and 7 of CITES require parties to file annual reports on trade in species on the appendices. These reports must summarize:

"The number and type of permits and certificates granted; the States with which such trade occurred; the numbers or quantities and types of specimens, names of species as included in Appendices I, II, and III and, where applicable, the size and sex of the specimens in question. Art. VIII. 6. (b)."

The U.S. Fish and Wildlife Service has carried out this function for the United States with generally improving efficiency in reporting animal trade. Efforts to automate reporting have helped and will be a great aid if completed and not dropped because of a short-sighted vision of fiscal priority. The situation for plants, however, has been puzzling, because the Service has neither reported trade in species of plants not acknowledged that such reporting is required by CITES. The current and, we are led to believe, prospective reporting of plant trade is by family and of little value to conservation because of the enormous variation in status of species within families, such as the cactus family. The criticism drawn today by CITES rests heavily on discontent with the listing of an entire family of organisms—in this case, cats—without evaluating the needs of each species. Let us not continue down this path by failing to consider the needs of plant species once listed.

In the various ways I have described, the implementation of the Endangered Species Act could be improved to enhance the effectiveness of international conservation efforts. The suggestions I have made are intended to serve as careful refinements to a statute that has been singularly important and singularly effective in the preservation of biological diversity. As I noted at the outset, there are proposals which have been put forth, including many you will hear on the second day of these

hearings, that do not represent an effort to refine this Act, but rather to bludgeon it. If adopted, those proposals would set back our conservation efforts by a decade or more. Because setbacks of that magnitude today will result in the irreversible loss of many species, I place myself unwaveringly against them. I hope this committee will do the same.

Mr. BREAUX. The next testimony is from Mr. Marshall Meyers.

STATEMENT OF MARSHALL MEYERS

Mr. MEYERS. Mr. Chairman, members of the committee, I would like to summarize briefly my testimony and have the printed text included in the record.

Mr. BREAUX. Without objection the entire statement will be made part of the record.

Mr. MEYERS. My name is Marshall Meyers, I am appearing today as general counsel for the Pet Industry Joint Advisory Council [PIJAC]. I want to thank you for the opportunity to testify on the implementation and reauthorization of the Endangered Species Act.

As the pet industry has repeatedly testified, the industry is not only concerned with, but also dependent upon proper and rational wildlife resource management to protect wildlife and insure them as a renewable resource. Industry recognizes that a number of species are clearly endangered or threatened and therefore warrant the types of protection afforded by the act.

We oppose habitat destruction, especially when adequate measures are not employed for translocation of wildlife or the placement of such wildlife in captive breeding programs. For many species, placement in trade is not per se detrimental; legitimate trade often relieves the pressures for illicit trade, and permits captive breeding, and often prevents their extinction.

The pet industry does not endorse the taking, possession, or capturing of species for use as common pets if they have been proven to be endangered. Those species, however, may be and should be placed in captive breeding programs when habitat destruction is inevitable or dislocated wildlife cannot be translocated.

The Endangered Species Act, as well as the Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES], are essential to insure protection of endangered and threatened species; provided, however, that implementation and enforcement are carried out in accordance with the intent of Congress. On balance, the Endangered Species Act appears to be effective even though there are several areas which we feel require improvement.

As a preliminary comment, I want to emphasize that the pet industry endorses reauthorization of the act for a 2- or 3-year period, and urge it be properly funded.

Reauthorization, or sunset provisions, provide the Congress a unique opportunity to compel both periodic congressional and administrative review as well as place unique pressures upon the administration to efficiently and effectively carry out the congressional mandate during the interim period. While it may be unfortunate for the Congress to repeatedly expend time in oversight and reauthorization proceedings, such constraints appear to be the most effective solution.

Most of our industry's concerns have been and can be resolved through administrative action; they do not require substantial amendments to the act at this time. The captive breeding regulations and the requisite permit procedures, for example, have been streamlined and are working. Interior's Wildlife Permit Office continues to experiment with innovative procedures to make the program more efficient and effective.

A serious problem which has not been resolved administratively involves myriad wildlife lists one is compelled to review to ascertain compliance. Interior has yet to publish a consolidated list indicating by species the particular laws and/or regulations applicable. Multiple listings are a real, not hypothetical, problem.

To insure compliance, one should review lists for injurious wildlife, Endangered Species Act species, CITES species, migratory birds, et cetera. The lists as well as various regulations overlap and often lead to confusion. Even Interior's staff encounters difficulties.

Private citizens contact law enforcement agents to determine which permits are required for nonnative species; the agent advises that CITES appendix II—threatened—permits are all that are required; the shipment enters the United States, the agent subsequently discovers the species happen to also be on the Endangered Species Act list; the shipment is seized and a \$4,000 bond posted, and the importer assessed a \$1,000 fine and the bond forfeited. Attorneys become involved, expenses soar, all over an inadvertent mistake which would have been avoided if a consolidated list existed.

During the December 1981 hearings before the Senate Subcommittee on Environmental Pollution, we testified that Interior should consolidate the wildlife lists and code them to indicate the applicable laws and regulations, but Interior simply does not have the money to do it. Industry's previous attempts to obtain Federal consolidation failed.

As a result of our December testimony, several meetings have been held with the Wildlife Permit Office regarding the possibility of substituting a privately published combined list in lieu of a federally published combined list. We are working with the publisher to expand and update their State list. We hope that will result in more time-sensitive and useful publications. This effort, however, may be futile.

Our primary concern is one's ability to demonstrate due care. Reliance upon a nongovernmental publication normally would not meet the due care standard absent the Department's developing a set of guidelines and/or regulations listing various activities constituting due care, such as reliance upon a privately published consolidated list. Otherwise, a nongovernmental publication list is virtually useless.

We urge the Congress to encourage the Department's publishing due care guidelines and sanctioning a privately published consolidated list.

Another concern involves dual listings under the act and CITES which cause substantial confusion, especially as to nonnative species. CITES as an international trade convention is specifically designed to protect, inter alia, those members of the animal kingdom proven to be endangered, appendix I or threatened appendix II.

CITES implemented mechanisms specifically permitting trade in appendix II species. It makes little sense, therefore, to list CITES appendix II nonnative species under the Endangered Species Act when the CITES parties, often countries of origin, have affirmatively determined that trade is nondetrimental to the survival of the species in the wild. The CITES parties, as part of the listing criteria, evaluate, *inter alia*, population size, geographic range, and habitat destruction. Therefore, there is no need for the United States to maintain CITES nonnative species on the domestic list, especially appendix II threatened species.

At pages 6 through 8, we comment on the possibility of providing procedures for an administrative hearing, before an administrative law judge in those instances where there is substantial opposition to or belief that a particular listing or delisting is inappropriate.

As to the CITES implementation, a number of species have been listed which are clearly neither endangered nor threatened, and probably no group has been more adversely affected than the pet bird industry with the wholesale listing of the psittacines at the last New Delhi outing.

The only practical recourse available to the United States to protest unwarranted listings is entering a reservation pursuant to article XXIII of CITES. We recognize the inherent difficulties and foreign policy issues related to invoking this form of opposition, particularly with multilateral treaties.

In my testimony before the Senate in December, my comments were misinterpreted as meaning I was supporting an automatic resolution. I was obviously too subtle. We do not endorse an automatic reservation under CITES. Apart from the fact that it is probably unconstitutional, we do not feel that that is the solution.

Entering a reservation alone will not solve the problem. Other CITES parties still require the CITES documentation we would exempt through the reservation process. Interior should be compelled, however, to implement an effective program for transmitting the United States continued concern about the CITES listing-delisting process. If the CITES parties continue to ignore established criteria apart from the intent of the convention, the United States could then give serious consideration to continued participation in and support of CITES. CITES' success will come about only through intellectual honesty, not through questionable roadblocks.

The final area of my testimony was a parting blow to ICAC, but I feel enough has been said during the morning session, so with that, Mr. Chairman, I conclude my comments. I will be happy to answer any questions.

[Statement of Mr. Meyers follows:]

STATEMENT OF MARSHALL MEYERS, PET INDUSTRY JOINT ADVISORY COUNCIL

Mr. Chairman and members of the subcommittee, my name is Marshall Meyers and I am appearing today as General Counsel of the Pet Industry Joint Advisory Council (PIJAC). I want to thank you for the opportunity to testify on the implementation and reauthorization of the Endangered Species Act.

As the pet industry has repeatedly testified, the industry is not only concerned with, but also dependent upon proper and rational wildlife resource management to protect wildlife and ensure them as a renewable resource. Industry recognizes that a number of species are clearly endangered or threatened and therefore warrant the types of protection afforded by the Act. We oppose habitat destruction, especially

when adequate measures are not employed for translocation of wildlife or the placement of such wildlife in captive breeding programs. For many species, placement in trade is not per se detrimental; legitimate trade often relieves the pressures for illicit trade, and permits captive breeding, and often prevents their extinction.

The pet industry does not endorse the taking, possession or capturing of species for use as common pets if they have been proven to be endangered. Those species, however, may be and should be placed in captive breeding programs when habitat destruction is inevitable or dislocated wildlife can not be translocated.

While the pet industry agrees that certain species are not suitable as household pets, the propagation of many species is often furthered by individuals who are aviculturists, herpetologists, ichthyologists or primatologists, conducting successful and beneficial captive breeding programs. The majority of these breeding efforts are conducted at the owner's residence or farm, not in zoos or scientific institutions. Such programs, including access to specimens, should be encouraged; neither regulatory nor statutory roadblocks should curtail legitimate efforts of institutions or individuals.

The Endangered Species program is fraught with complex, emotional and environmental issues which require the balancing of interests. The Endangered Species Act, as well as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), are essential to ensure protection of endangered and threatened species; provided, however, that implementation and enforcement are carried out in accordance with the intent of Congress. On balance, the Endangered Species Act appears to be effective even though there are several areas which we feel require improvement.

As a preliminary comment, I want to emphasize that the pet industry endorses reauthorization of the Act for a two or three year period. Reauthorization or sunset provisions provide the Congress a unique opportunity to compel both periodic Congressional and administrative review as well as place unique pressures upon the administration to efficiently and effectively carry out the Congressional mandate during the interim period. While it may be unfortunate for the Congress to repeatedly expend time in oversight and reauthorization proceedings, such constraints appear to be the most effective solution.

Most of our industry's concerns have been and can be resolved through administrative action; they do not require substantial amendments to the Act at this time. The captive breeding regulations and the requisite permit procedures, for example, have been streamlined and are working. Interior's Wildlife Permit Office continues to experiment with innovative procedures to make the program more efficient.

A serious problem which has not been resolved administratively involves myriad wildlife lists one is compelled to review to ascertain compliance. Interior has yet to publish a consolidated list indicating by species the particular laws and/or regulations applicable. Multiple listings are a real, not hypothetical, problem.

To ensure compliance, one should review lists for injurious wildlife, Endangered Species Act species, CITES species, migratory birds, etc. The lists as well as various regulations overlap and often lead to confusion. Even Interior's staff encounters difficulties. Private citizens contact law enforcement agents to determine which permits are required for non-native species; the agent advises that CITES Appendix II (Threatened) permits are all that are required; the shipment enters the United States; the agent subsequently discovers the species happen to also be on the Endangered Species Act list; the shipment is seized and a \$4,000 bond posted; and the importer assessed a \$1,000 fine and the bond forfeited. Attorneys become involved, expenses soar—all over an inadvertent mistake which would have been avoided if a consolidated list existed.

During the December 1981 Hearings before the Senate Subcommittee on Environmental Pollution, we testified that Interior should consolidate the wildlife lists and code them to indicate the applicable laws and regulations. Industry attempts to obtain Federal consolidation failed. As a result of our December testimony, several meetings have been held with the Wildlife Permit Office regarding the possibility of substituting a privately published combined list for a Federally published combined list. We are working with the publisher to develop a more time sensitive and useful publication. This effort, however, may be futile.

Our primary concern is one's ability to demonstrate due care. Reliance upon a non-governmental publication normally would not meet the due care standard absent the Department's developing a set of guidelines and/or regulations listing various activities constituting due care, such as reliance upon a privately published consolidated list. Otherwise, a non-governmental publication list is virtually useless. We urge the Congress to encourage the Department's publishing due care guidelines and sanctioning a privately published consolidated list.

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Dual listings under the Act and CITES cause substantial confusion, especially as to non-native species. CITES as an International Trade Convention is specifically designed to protect, *inter alia*, those members of the animal kingdom proven to be endangered (Appendix I) or threatened (Appendix II). CITES implemented mechanisms permitting trade in Appendix II species. It makes little sense, therefore, to list CITES Appendix II non-native species under the Endangered Species Act when the CITES Parties, often countries of origin, have affirmatively determined that trade is non-detrimental to the survival of the species in the wild. The CITES Parties, as part of the listing criteria, evaluate, *inter alia*, population size, geographic range and habitat destruction. Therefore, there is no need for the United States to maintain CITES non-native species on the domestic list.

An area requiring statutory amendment involves the listing/delisting process. Listing/delisting via rulemaking procedures under Section 553 of the Administrative Procedure Act (5 U.S.C. § 553) does not provide the most effective mechanism. Letter writing contests, *ex parte* communications, political pressures, and reliance upon data, not subjected to the burden of proof and cross-examination of a formal evidentiary hearing produce questionable results. It is well recognized that unjustified species listings have occurred under both the Endangered Species Act and CITES. The Section 553 public "meetings" or "hearings" presently available under the Act, are simply not adequate; especially when there is a presumption favoring listing and an underlying belief that consumptive use of animals for a profit is immoral and wrong.

To develop the best scientific and commercial data available, a formal hearing process in conformance with the standards of Section 554 of the Administrative Procedure Act (5 U.S.C. § 554) should be incorporated in the statute in lieu of the existing Section 553 informal, rulemaking type procedure. This would provide not only the Department, but also interested persons, an opportunity to develop, on an evidentiary record, the best available data subject to cross-examination. It would require an opinion by an Administrative Law Judge—an opinion which would contain the Judge's findings and conclusions and the reasons and basis therefor. Adjudication of complex issues could first be determined at the administrative level, rather than turning to the Courts which are loath to overturn administrative determinations, absent a clear showing that the administrative determination was arbitrary, capricious, an abuse of discretion or otherwise not in accordance with the law.

Providing for formal hearings would result in more realistic decision making. It should alleviate the concerns of States, foreign countries, or other interested persons with respect to improper listings or delistings. The hearings would not be mandatory for all listings/delistings, but would be invoked by a petition of an interested party or by the Department's own initiative. To avoid lengthy delays in listing controversial species, a listing could be made pending the outcome of the hearing. Ample safeguards could be incorporated to satisfy the concerns of both the environmentalists and trade. We urge the Committee to consider such an amendment.

As to CITES implementation, we can not fault Interior's CITES Appendix II permit process. The Department continues to make great strides in making that process more efficient. The CITES listing/delisting procedures, however, are a different story. As under the Act, a number of species have been listed which are clearly neither endangered, nor threatened.

The only practical recourse available to the United States to protest unwarranted listings is entering a reservation pursuant to Article XXIII of CITES. We recognize the inherent difficulties and foreign policy issues related to invoking this form of opposition, particularly with multilateral treaties. In certain circumstances, however, a reservation is appropriate and does not signal deterioration of the United States' commitment to CITES. In fact, it would strengthen this commitment to strictly adhere to criteria adopted by the Parties.¹

To illustrate this point, I will briefly review the recent listing of an entire order during the Third Meeting of the CITES Parties in New Delhi, India. The proposal to list all Psittaciformes (parrots) on Appendix II, except those listed on Appendix I, and three "common" species (budgies, cockatiels and Rosey-ringed parakeets), was replete with generalizations, little to no trade data, and conclusory statements. Specific data were virtually non-existent. In fact, the listing proponent—the United Kingdom—admitted that 134 species are common in the wild and indicated that trade in many species is extremely limited, not known or nonexistent and that only

¹ Procedures for determining which species should be listed on CITES appendices were established at the First Regular Meeting of the Conference of the Parties in Berne, Switzerland, in November 1976. The "Berne Criteria" specifically requires that certain biological and trade data be provided. CITES Documents Conf. 1.1, Conf. 1.2 and Conf. 1.3.

41 of the 300 species of psittacines are "rare", "endangered", "scarce", "vulnerable", "possibly extinct", or "very rare". As to the remainder, their status was "indeterminant", "unknown", or "declining". Yet, reliance upon unsubstantiated statements and questionable data prevailed and, therefore, an entire order was listed.

During the Meeting, the United States and Switzerland strongly opposed the concept of wholesale listings absent strict adherence to the Berne Criteria. In lieu of entering a reservation, Interior stated that it would communicate to the foreign governments "its serious concern about the listing of psittacine birds". 46 Federal Register 44660, September 4, 1981.² Such a communication, however, will do little in demonstrating to the other CITES Parties that the United States is truly concerned about whether the criteria established for listing or delisting shall be followed. It hardly assuages the concerns of those who are adversely affected by unsubstantiated and unjustified listings.

We do not have an easy solution. Entering reservations alone will not solve the problem. Interior should be compelled to implement an effective program for transmitting the United States' continued concern about the CITES' listing/delisting process. If the CITE Parties continue to ignore established criteria and depart from the intent of the Convention, the United States should give serious consideration to continued participation in and support of CITES.

The final area of concern involves the future of the International Convention Advisory Commission created by the Endangered Species Act to function as a scientific advisory body to the Secretary of Interior on CITES' matters. ICAC is an example of an organization which has exhibited a tremendous ability to generate paper, publish inaccurate data, and consistently recommended cumbersome recordkeeping requirements, survey forms, and other documents to justify and perpetuate its existence. ICAC duplicated many of the efforts of the Wildlife Permit Office and the Office of Scientific Authority; it appeared that ICAC desired to become the United States' CITES Management and Scientific Authority. Apart from the fact that ICAC has been dissolved by administrative fiat, the pet industry recommends that it be legislatively abolished.

In closing, Mr. Chairman, I want to reemphasize PIJAC's position that on balance the Endangered Species Act and its implementation is effective. We do not support substantial revisions to the Act which would weaken the original intent of Congress. As stated previously, a number of the problems raised this morning can and should be cured administratively. We look forward to working closely with the Committee and participating in future hearings.

Thank you very much for providing me this opportunity to testify today.

Mr. BREAUX. Mr. Lieber, glad to have you here.

STATEMENT OF GERSON LIEBER

Mr. LIEBER. Thank you, Mr. Chairman.

My name is Gerson Lieber, president of the Reptile Skin Industry Trade Association.

We have as members artisans who are manufacturers of fine leather goods and the suppliers of that craft such as tanners, importers of skins, finished products, and the retail stores which sell the finished products.

We are a small industry in terms of dollars, but we believe that we bulk large in terms of esthetics for we use, among other leathers, reptile skins, which form the most beautiful of our finished products. Because of our dependence on the reptile skins we are the most ardent of conservationists for, without a steady supply of reptiles, we are out of business. Therefore, we advocate farming and controlled cropping.

I want to speak for the American craftsman who is also an endangered species. Some years ago, before the passage of the Endangered Species Act by the Federal Government and the various States, there were many more of us. Now in the United States

² Switzerland entered a reservation.

there are but a handful of people left with the skills and capabilities of working with these fine and difficult leathers.

In Japan various artisans have been designated as national treasures. In the United States artisans tend to be treated as impedimenta with their work collecting praise long after the extinction of the creators.

I believe it would be interesting to you gentlemen if I cited as background a situation in which my particular firm, Judith Lieber, Inc., finds itself.

We must go to Europe twice a year to purchase all our bag hardware since fine frames and locks are no longer made in the United States. All of our leather is imported, even the Louisiana alligator skins must be tanned in Europe and reimported. Once the finest calfskin in the world was made in America by the Ohio Leather Co., but no more.

So germane to the purposes of this hearing is, when we go to Europe we see the alligator and crocodile products that crowd the shop windows are made from species that are not considered endangered in Europe but have been declared so by our Government. They are not available to the American craftsman-businessman, but the competition in Europe and Japan has a much wider choice.

Furthermore, commerce in reptile skin products in Europe is not hampered by such chaotic conditions as in the United States, where the various States have passed and enforced laws much more severe and strict than the Federal regulations.

A case in point is the State of California, where certain reptile skin products that are perfectly legal under the Federal regulations have been seized and retailers heavily fined for their ignorance of unexpected State laws. We have the distinct feeling that we are running a gauntlet and are under attack from all sides. You can picture, gentlemen, the reaction of retailers and the buying public to such incidents.

There is no question that commerce is chilled and discouraged in regard to reptile skin products. Money is not spent where there is uncertainty and confusion. The American artisan-businessman, already in a precarious economic condition, can hardly afford the loss of such an important market as California, where business in reptile skin products is at a standstill, completely disrupted, which may have been the real purpose of the California officials.

It is of the utmost importance that our small industry, barely treading water, should not be swamped by these anachronistic and unfair State actions. Therefore, we call on the Federal Government to amend the present Endangered Species Act to preempt all conflicting State laws regarding reptile skin products, which should banish some of the chilling business atmosphere under which we are now forced to operate, and to give the American artisan-businessman a fair shake so we can compete with the domestic and world marketplace.

Frankly, we have no domestic protection. So at the very least we should not be penalized for being American by the unfair conditions to which we alone are subjected and to which I have previously referred.

I thank you.

[Statement of Mr. Lieber follows:]

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STATEMENT OF GERSON LEIBER, PRESIDENT, REPTILE SKIN INDUSTRY TRADE
ASSOCIATION

Mr. Chairman, I am Gerson Leiber, President of the Reptile Skin Industry Trade Association.

The membership of the Reptile Skin Industry Trade Association includes importers, tanners, cutters, fabricators and retailers of the skin and products made from the skins of reptiles. Some of the members are large or well known companies such as Neiman-Marcus, Judith Leiber and Hermes of Paris; many other members are smaller less visible companies which play an integral part in the industry; for example, Dodema of New Jersey, Inc. and Intertan Agencies, Inc. All of the members of this Trade Association are concerned about the patchwork federal and state regulatory approach to the reptile skin industry and the disruption of regular supplies of raw materials caused by abrupt federal policy changes. In order to explain the industry's concern about these issues we describe in Part I below the manner in which the industry functions.

I. A DESCRIPTION OF THE COMMERCIAL PROCESS FOR UTILIZING REPTILE SKINS

A substantial majority of reptile skins originate from foreign countries. It is only in the last few years that American alligators (*Alligator Mississippiensis*) have been farmed in sufficient numbers and hunting regulations have been sufficiently eased to provide a sizable quantity of skins for commercial use.

Typically then the skins will come from animals which have been hunted by citizens of poverty stricken areas in rural or jungle sections of "underdeveloped" countries. These hunters usually sell the skins to regional tanneries where they are "crusted" or half finished. The skins are then shipped to tanneries in Europe, usually Italy or France, where they are finished and in some instances cut into pieces which are suitable for making finished products. The skins are then sold to manufacturers located either in the United States or Europe where they are fabricated into boots, shoes, handbags, belts, wallets and other accessories. The manufacturers then sell their products to retail stores throughout the United States and in some instances the world.

The movement of the skin of the reptile throughout its commercial utilization is accompanied by a chain of documents and government approvals. For example, if the reptile were hunted in Bolivia the Bolivian government would issue a certificate stating the skin originated in Bolivia and complied with Bolivian quota requirements. The crusted skin and document then travel together to France, for example, where the French Customs Officials examine the skin and documents and, if approved, allow them to be delivered to the French tanner. After tanning and perhaps cutting the skin the tanner then creates a new document identifying the skin and its origin, completes the several documents required by United States Fish and Wildlife and United States Customs and sends them together with the skin to the United States. At the border of the United States the skin and documents are examined by United States Government Officials before they can be delivered to the manufacturer.

The manufacturer must then continue to monitor the skin and documents in order to prevent the shipment of a product which includes the skin of a python, for example, to California which has laws prohibiting its sale. Once the reptile product is received by a large retailer with stores throughout the country, the retailer must also continue to monitor the product and documents to insure that a product which may be legally sold by its store in one state is not inadvertently transferred to a store in another state where sale of the product is prohibited.

If the reptile skin originates in the United States, Louisiana, for example, the same process is followed. Virtually all of the tanning business was driven from the United States to Europe when the sale of all reptile skins in the United States was prohibited many years ago. Consequently almost all tanning is done in Europe. The American alligator skin is tagged before it is sent to Europe, and that tag is not removed until it is returned to the United States for fabrication. Otherwise the process is the same.

II. DAMAGE CAUSED BY ENFORCEMENT OF STATE REGULATIONS

Initially, of course, compliance with this additional layer of state regulations materially adds to the cost of doing business, particularly for the American retailer and manufacturer. But that is the least of the economic injury caused by these regulations. State law enforcement authorities as far apart as New York and California have been enforcing state statutes in an incredibly highhanded, almost violent fash-

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ion. For example, at high noon on a weekday state law enforcement officials walked into Lord and Taylors main store in Manhattan and after displaying sidearms threatened to kick in display cases and arrest the Vice-President of Lord and Taylor if he tried to stop them from seizing various merchandise. (All of the merchandise was subsequently returned to Lord and Taylor. Although no apology was offered by state officials, one was given by Federal Officials on behalf of the federal agent who accompanied the state agents.) In California gun toting agents rounded-up over \$50,000.00 worth of merchandise from many highly reputable stores on Rodeo Drive in Beverly Hills. The agents claim the reptile products are illegal under California law although they are legal under international and federal law. That case is now pending although it seems likely that most of the merchandise seized will be returned. The California authorities are allegedly taking the position that anaconda (which is legal) is python (which is illegal) and is therefore subject to seizure.

The national repercussions of these state actions are enormous: large and small retail stores are cancelling orders across the country in fear that they will be raided and their customers intimidated. Individual customers are reluctant to purchase products which have generated such bad publicity. In sum, the national market for reptile products is collapsing as the result of these uninformed, abusive state actions with an adverse economic effect extending from retailer to manufacturer to tanner to the impoverished hunter in underdeveloped countries.

III. PROPOSED FEDERAL PREEMPTION OF STATE LAWS WHICH CONFLICT WITH FEDERAL CONTROL OF INTERNATIONAL TRADE IN CERTAIN SPECIES OF REPTILES

The United States is a signatory to the Convention on International Trade in Endangered Species ("CITES") which created an international organization and structure to protect endangered species and to govern the international trade in species and their products which were endangered. The treaty provides that each individual nation may, if it chooses, enact laws which further restrict international trade in certain species. The Endangered Species Act, Title 16, U.S.C., § 1531, et seq., while generally paralleling CITES restrictions does in fact prohibit importation and trade in certain species which CITES approves; e.g., Caiman Jacare is not allowed to be commercially imported or sold within the United States although it can be commercially used and sold throughout the rest of the world.

It is our position that the CITES treaty and the Endangered Species Act should not be subject to the individual regulations of the various states. Several states in addition to California and New York have taken actions based on their statutes which have international repercussions. We ask that the Endangered Species Act be amended to allow a state to control the commercial exploitation of species which are indigenous to that state. Species which are of foreign origin to that state should be subject only to the control of the CITES, the Federal government and if appropriate, the state of origin.

IV. SUBSTANTIAL CHANGES IN FEDERAL POLICY HAVE WITHOUT NOTICE TO THE INDUSTRY ELIMINATED MAJOR SOURCES FOR REPTILE SKINS

For well over twenty years approximately 150,000 reptile skins have been exported from Bolivia to the world market. The species of reptile which has provided the skin is Caiman, the subspecies is either Caiman Crocodilus Crocodilus or Caiman Crocodilus Jacare, the Bolivian government calling it the former, the majority of the scientific community, the latter. Regardless of its name, Bolivian Caiman has been a steady, reliable source of skin for a lengthy period of time. In August, 1981 authorization to accept imports of Caiman skin or products fabricated from Caiman skin which originated in Bolivia was withdrawn by officials of United States Fish and Wildlife. This change in policy was made without public notice and without an opportunity to be heard. Since the policy change was implemented Fish and Wildlife officials have been responsive to the information supplied to them and they have begun to conduct an investigation to determine the correct name of the Bolivian Caiman species and its numbers. However, the investigation should have been conducted before the policy change not after. (Whether or not the policy change was correct it admittedly was based on misinformation). Companies who had purchased Bolivian Caiman skins to use in the United States were left without alternative sources of supply while they had large quantities of skins in Europe without any market. (European countries continue to accept Bolivian Caiman but could not absorb the quantities which could no longer be exported to the United States.) A ninety or at least a sixty day public notice of the proposed change would have avoided this problem. Fish and Wildlife Officials made a similar decision with respect to imports from Paraguay and again unnecessary problems and losses were incurred.

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We do not know when Fish and Wildlife Officials will strike again. We ask that they be required to publish a notice in the Federal Register at least ninety days in advance of any change in import policy for reptile skins. Such a notice would give interested parties an opportunity to oppose the policy change and would allow businesses to make reasonable, planned economic decisions based upon the law.

Mr. BREAUX. Duane Smelser.

STATEMENT OF DUANE SMELSER

Mr. SMELSER. Thank you, Mr. Chairman and members of the committee.

I am Duane Smelser, president of the Safari Club International [SCI]. SCI is a sportsman's group dedicated to the conservation of wildlife, the preservation of sport hunting, and the protection of hunters' rights. SCI represents the views held by our more than 1 million sportsman members, affiliates, and associates.

I sincerely appreciate the opportunity to present SCI's views and proposals on the Endangered Species Act before this subcommittee today.

Sport hunting is not merely a sport, rather it is recognized as playing an immensely important role in effective wildlife conservation and management programs in the United States and abroad. It is not the sportsman who is a threat to wildlife. Rather, the dangers to wildlife are found in the continuing loss of habitat and the illegal profit-seeking poacher who has no regard for wildlife or the laws designed to conserve and protect such resources.

The sport hunter is the true conservationist. We need not remind the members of this subcommittee that it has been the sportsmen of this nation who have provided more than \$5 billion over the years for wildlife conservation projects through the purchase of hunting and fishing licenses, permits, fees, and other private contributions.

I am proud to say that since the formation of SCI only 10 years ago, we have given over \$1 million in equipment and direct financial assistance to a vast range of wildlife conservation and anti-poaching projects on the local, State, national, and international levels. Such efforts include the donations of telemetry equipment and the awarding of research grants for various wildlife studies.

The members of this subcommittee might be surprised to learn that SCI has contributed substantially to restoration and conservation programs for nongame species as well, including the endangered peregrine falcon and the endangered Kirtland's warbler, both of which are obviously not game birds. Moreover, SCI has donated many jeeps, trucks, and sophisticated communications equipment to several foreign nations to aid in their efforts against poaching.

The Safari Club International fully supports the Endangered Species Act as an important tool in the cause to conserve, manage, and protect wildlife resources. Since sportsmen are conservationists and the purpose of the Endangered Species Act is to conserve wildlife resources, it would appear that the act would be perfectly compatible with lawful activities by sportsmen to conduct and stimulate such conservation measures. Unfortunately, though, this is not always the case as the act does present some troublesome and unnecessarily complicating problems to sport hunters.

The guidelines, requirements, and procedures affecting the necessary permits which a sportsman needs to lawfully take and import game trophies and the resulting administrative delays, are a constant source of frustration and confusion to the American sport hunter who, nevertheless, makes every conscious and good faith effort to comply with the preponderance of redtape.

As our first preference, SCI recommends that the act be amended by limiting its scope to domestic species. This is certainly a viable option in light of the tremendous success and effectiveness of the CITES treaty. This would go far to eliminate much of the unnecessary overlapping and duplication which the sport hunter must continuously confront under both the act and CITES.

In the alternative, however, I have attached as part of my testimony a number of proposed amendments which I respectfully request the members of this subcommittee to carefully consider during your legislative deliberations.

The amendments contained in the written statement are technical in nature. Therefore, in the interest of time, I will merely summarize them for you.

Most of our proposed amendments aim to simply grant explicit recognition to the important value of sport hunting to wildlife conservation. We feel this is long overdue. Several of the amendments seek to "set in cement" the understanding that sport hunting does not constitute commercial activity and, moreover, that properly regulated sport hunting is consistent with the act.

One of our amendments proposes a provision whereby the U.S. Fish and Wildlife Service may not seize foreign shipments of game trophies in the United States if they were taken legally in the country of origin and may be lawfully possessed in the country of destination. We believe this issue of accidental landings deserves a statutory remedy.

Another amendment proposes to somewhat lessen the unusually broad authority of the Interior Department to list certain species for no reason other than similarity of appearance. I wish to emphasize that SCI does not object to listings for reasons of similarity of appearance; we merely wish to see that such listings are the result of a more documented analysis than is presently provided in the act.

At the present time there are several species which are listed as endangered under the act which, because of the success of breeding and management programs, the surplus of such species can be legally taken by a sport hunter in the country of origin and lawfully exported from that country. However, due to the overall listing of the species as endangered under the U.S. statute, any importation of such game trophies into this country is prohibited. Many nations are losing much-needed revenue from these model conservation programs because American sportsmen are not as willing to take such a surplus animal since they cannot bring it back home.

We propose an amendment which would permit importations of such surplus wildlife provided the species is lawfully taken as part of a recognized conservation or management program.

We are not promoting the sport hunting of endangered species in countries where such is prohibited. By law, sportsmen cannot take and import such species. The amendment specifically addresses

only those surplus species in countries where such sport hunting is legal and then only in those specific cases where the country's management program can meet all of the conditions imposed by CITES and the act.

It is hoped that the effect of the proposed amendment would be to encourage foreign nations to launch similar aggressive management effort to further stimulate conservation programs of their wildlife.

In conclusion, it might be argued that the purposes of our proposed amendments might be better satisfied in an administrative fashion. However, it is inadequate to settle substantive issues administratively as this does not lend to a lessening of the unfortunate wavering between protectionist and consumptive interpretations and implementations of the act caused by changes of administration after national elections. Therefore, explicit recognition within the act itself of sport hunting's important contributions and values to proper wildlife conservation will go much farther to dispel the omnipresent paranoia among sportsmen that their historical right to lawfully hunt and conserve wildlife is threatened whenever a new or revised regulation or statute looms on the horizon.

I would like at this time to thank Congressman Breaux for having given me the opportunity today to present to this subcommittee the views of the Safari Club International as to how the Endangered Species Act may be improved.

I would be pleased to attempt to answer any questions regarding my testimony which members of this subcommittee may have.

Thank you.

[Statement of Mr. Smelser follows:]

STATEMENT OF DUANE SMELSER, PRESIDENT, THE SAFARI CLUB INTERNATIONAL

I am Duane Smelser, president of the Safari Club International ("SCI"). SCI is a sportsman's group dedicated to the conservation of wildlife, the preservation of sport hunting and the protection of hunters' rights. SCI represents the views held by our more than one million sportsmen members, affiliates, and associates. I sincerely appreciate the opportunity to present SCI's views and proposals on the Endangered Species Act before this Subcommittee today.

Sport hunting is not merely a sport, rather it is recognized as playing an immensely important and valuable role in effective wildlife conservation and management programs in the United States and abroad. It is not the sportsman who is a threat to wildlife species. Rather, the dangers to wildlife are found in the continuing loss of habitat and the illegal profit-seeking poacher who has no regard for wildlife or the laws designed to conserve and protect such resources.

The sportsman is the true conservationist. We need not remind the Members of this Subcommittee that it has been the sportsmen of this nation who have provided more than \$5 billion over the years for wildlife conservation projects through the purchase of hunting and fishing licenses, permits, fees, and other private contributions.

Since the formation of SCI only ten years ago, I am proud to state that SCI has given over \$1 million in equipment and direct financial assistance to a vast range of wildlife conservation and anti-poaching projects on the local, state, national and international levels. Such efforts include the donations of telemetry equipment and the awarding of research grants for various wildlife studies. The Members of this Subcommittee might be surprised to learn that SCI has contributed substantially to restoration and conservation programs for non-game species as well, including the endangered peregrine falcon and the endangered Kirtland's warbler, both of which are obviously not game birds. Moreover, SCI has donated many jeeps, trucks, and sophisticated communications equipment to several foreign nations to aid in their efforts against poaching.

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Wildlife conservation programs in many foreign nations are almost solely dependent upon the revenues generated from regulated sport hunting and well-controlled safari operations.

"The [United States Fish and Wildlife] Service is convinced that in some cases permitting the importation of a legally taken leopard trophy from southern Africa will benefit the species. . . . Because of the above considerations, the Service believes that there will be cases in which permitting the importation of leopard trophies will not only be detrimental to the survival of the species, but will assist in their conservation. Such a situation could exist, for example in countries where the leopard is destroyed as vermin because of predation problems with livestock, but where some such depredation might be tolerated if the leopard has an economic value through more [sport] hunting." 47 Fed. Reg. 4208 (1982).

"American sportsmen have traditionally supplied the bulk and funds for wildlife conservation efforts in the United States. The situation is the same in Africa. If individual African nations are to develop adequate conservation programs, they will undoubtedly have to utilize funds provided by foreign hunters. [Sport hunting] will permit the African nations to continue to receive revenue from American sportsmen so that the nations can develop and implement an adequate wildlife management effort that will insure the long-term perpetuation of the resource." H.R. Rep. No. 96-661, Part 1, 96th Cong., 1st Sess. 18 (1979).

"The [House] Committee [on Merchant Marine and Fisheries] also recognizes that one of the major impediments to the development of an effective elephant management and habitat conservation program is the absence of sufficient funds in African nations which have important and pressing human needs to satisfy. In order to assist these nations in generating funds for elephant conservation programs, and for controlling the trade in elephant products, the Committee specifically exempted from the provisions of H.R. 4685 the importation of elephant tusks taken by sports hunters. The evidence presented to the Committee showed that in 1977, sportsmen took only 577 elephants. In this regard, it should be noted that Ian Parker estimated that approximately 65,000 elephants die each year as a result of human influences, including sport hunting. Other estimates are much higher. The total take of 577 elephants produced \$784,750 in license fees and taxes, almost all of which was used in the affected countries' conservation programs. The same 577 elephants contributed \$9,079,150 to the economies of the affected countries, an average of \$14,373 per elephant." H.R. Rep. No. 96-661, Part 1, 96th Cong., 1st Sess. 13 (1979).

The Safari Club International fully supports the Endangered Species Act as an important tool in the cause to conserve, manage, and protect wildlife resources. Since sportsmen are conservationists and the purpose of the Endangered Species Act is to conserve wildlife resources, it would appear that the statute would be perfectly compatible with lawful activities by sportsmen to conduct and stimulate such conservation measures. Unfortunately, though, this is not always the case as the Endangered Species Act does present some troublesome and unnecessarily complicating problems to sport hunters, and some of these situations have evolved into perplexing dilemmas. The guidelines, requirements, and procedures affecting the necessary Endangered Species Act and CITES permits to lawfully take and import individual game species, and the resulting delays, are a constant source of frustration and confusion to the American sport hunter who, nevertheless, makes every conscious and good faith effort to comply with the preponderance of red tape. Therefore, I very much welcome this opportunity to present SCI's recommendations to this Subcommittee in a sincere effort to correct, alleviate, and, particularly, simplify some of these concerns.

As our first preference, SCI recommends that the Endangered Species Act should be amended by limiting its scope to domestic species. This is certainly a viable option in light of the tremendous success and effectiveness of the Convention on International Trade on Endangered Species of Wild Fauna and Flora ("CITES"). This option would eliminate much of the unnecessary overlapping and the duplication of efforts which the sport hunter must continuously confront.

In the alternative, however, I have attached hereto, as part of my testimony, a number of proposed amendments which I respectfully request the Members of this Subcommittee to carefully consider during your legislative deliberations.

SCI believes strongly that the United States must adhere to the species listing and delisting criteria established under the Endangered Species Act. Actions by foreign nations at the recent CITES meeting in New Delhi, India raise some concern as to the manner and degree by which the international community views such criteria.

Furthermore, SCI fully supports the return of management authority, where appropriate, to the States over resident wildlife species. This concept is certainly a

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sound wildlife management philosophy. In keeping with the spirit and intent of the Marine Mammal Protection Act, the return of management authority to the States should be pursued more actively under the Endangered Species Act.

In addition to the following proposed amendments, SCI believes it is unnecessary to change the penalty structure established by the Endangered Species Act, as substantially all such violations may be prosecuted under the Lacey Act as amended. Moreover, there are certain advantages to retaining such a complementary penalty system as it leaves room for prosecutorial discretion depending upon the severity of the offense. Finally, it may provide a convenient tool for the proper disposition of cases charged.

However, should the Members of the Subcommittee deem it necessary to provide an increase in the penalty structure under the Endangered Species Act, I would like to remind the Members of this Subcommittee of SCI's very strong concern that a blanket or across-the-board approach is wholly inappropriate. As with the debate over the Lacey Act amendments, SCI fully supports stiff penalties for those commercial depredators. Thus, should there be any penalty increase under the Endangered Species Act, then it must provide a proper vehicle of distinction between the unintentional or inadvertent sportsman and the commercial criminal violator for whom we believe the penalty system should be targeted.

In some circles, it might be argued that the purposes of our proposed amendments might be better satisfied in an administrative fashion. However, it is inadequate to settle substantive issues administratively as this does not lend to a lessening of the unfortunate wavering between protectionist and consumptive interpretations and implementations of the Endangered Species Act caused by changes of Administration after national elections. Therefore, explicit recognition within the Endangered Species Act itself of sport hunting's important contributions and values to proper wildlife conservation will go much further to dispel the omnipresent paranoia among sportsmen that their historical right to lawfully hunt is threatened whenever a new or revised regulation or statute looms on the horizon.

I am aware that no amending or reauthorizing legislation to the Endangered Species Act has yet been introduced during this Congress. However, once this has occurred, SCI would be pleased to submit additional and revised recommendations to this Subcommittee.

ENDANGERED SPECIES ACT PROPOSED AMENDMENT NO. 1

Amend 16 U.S.C. 1533(a)(1)(2) by striking the text after the word "commercial."

Explanation

The belief apparently held by some that properly controlled sport hunting leads to the "overutilization" or depredation of wildlife is simply not true. We know of no game species which has been brought to the brink of extinction due to sport hunting. On the contrary, sport hunting as a regulated management tool leads to status enhancement of many wildlife species. Moreover, we perceive no pressing need to also condemn science or education as having "overutilized" wildlife species. We believe that sport hunting, science, and education (when properly monitored) are consistent with the purposes of the Act.

The proposed amendment would delete the explicit reference to sporting, scientific, and educational activities as having contributed to the "overutilization" of species. It would appear that such factors, when they may seldom be such, would be more fairly and appropriately incorporated implicitly in 16 U.S.C. 1533(a)(1)(5) which delineates all other "natural or manmade factors affecting the continued existence" of a species.

ENDANGERED SPECIES ACT PROPOSED AMENDMENT NO. 2

Amend 16 U.S.C. 1532(2) by striking the present text, and substitute therefore:

"The term 'commercial activity' means all activities of industry and trade, including, but not limited to, the buying or selling of fish or wildlife or plants and activities conducted for the purpose of facilitating such buying and selling: *Provided, however*, That it does not include—

(A) exhibition of fish or wildlife or plants by museums or similar cultural or historical organization; or

(B) lawful dealings of a sport hunter with a taxidermist, guide, outfitter, travel agent, or an airline."

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Explanation

The proposed amendment, which we hereby respectfully submit to this Subcommittee, concerns the definition of the term "commercial activity."

It has been the longstanding policy of the Congress and the United States Department of the Interior to recognize properly that sport hunting does not constitute any commercial activity. Since the enactment of the Endangered Species Act, it has been determined that the "commercial" aspects of a sporting hunt, such as the payment of an outfitter, guide, taxidermist, travel agent, or airline also do not constitute commercial activity.

"The 'commercial activity' portion of Section 4(d)(1) [of the recently enacted Lacey Act Amendments of 1981] does not encompass the dealings of a hunter with his taxidermist. Such dealings clearly do not constitute a sale or purchase of wildlife. Similarly, the dealings of a hunter with his travel agent or an airline to arrange a trip for the acquisition of wildlife clearly does not constitute a sale or purchase of wildlife." (S. Rep. No. 97-123, 97th Cong., 1st Sess. 12 (1981) and H.R. Rep. No. 97-276, 97th Cong., 1st Sess. 21 (1981)).

This is also reflected in Section 17.3 of the Endangered Species Regulations in which the phrase "industry or trade" is defined as the actual or intended transfer of wildlife from one person to another in pursuit of gain or profit. That definition further defines the term "commercial activity" as set out in Section 3 of the Endangered Species Act.

Thus, while the activities relating to sport hunting mentioned above have been determined and are regarded to be incidental to the primary purpose of the hunt, and not to constitute commercial activity in the sense of the Act, the statute, itself, has yet to incorporate such a distinction explicitly.

Whenever a regulation or rule is proposed or promulgated, there is recurring confusion within the sport hunting community as to any possible new applicability of the term "commercial activity" to sport hunting. Such ambiguity in these rules and regulations necessitates frequent requests by sportsmen and sport hunting organizations for a clarification regarding any reference to that term.

Since the proposed amendment is perfectly in line with the term "commercial activity," as it has been continuously interpreted by the Congress and the Department of Interior, the proposal is noncontroversial. As an added safeguard, however, the word "lawful" has been included in the proposal in order to draw a very clear line between legitimate and any possible illegal activity regarding sport hunting.

ENDANGERED SPECIES ACT PROPOSED AMENDMENT NO. 3

Amend 16 U.S.C. 1532(3) by striking the present text after the word "transplantation," and substitute therefor: "... regulated sport hunting, and other regulated taking."

Explanation

At the time of enactment of the statute, regulated takings were recognized as a useful and acceptable means to relieve population pressures. Yet, sport hunting was not recognized explicitly as such a conservation tool even though regulated sport hunting is utilized commonly as a means to protect and keep wildlife populations in check with their present habitat. Moreover, subsequent interpretations and policy determinations by the Department of Interior, as the Nation's principal conservation agency, have lent recognition to regulated sport hunting as an important wildlife conservation and management program. The purpose of the proposed amendment is to lend explicit and official recognition to the valuable role played by sport hunting as such a significant conservation tool.

Moreover, the definition of the terms "conserve," "conserving," and "conservation" in the statute makes a limited reference to relieving population pressures. However, the statute does not lend proper recognition of regulated sport hunting as a stimulant to wildlife conservation efforts.

In effect, if a resident wildlife species does not represent an economic or financial value to the landowner or farmer, then that species may come to be viewed as nothing more than vermin, and efforts could then be undertaken to remove the species as it may threaten nearby agricultural operations. The economic benefit received from sport trophy hunting (and its fees) represents the very incentive needed to persuade the landowner or farmer to manage the wildlife population and thereby protect the species from extermination in that area. In other words, sport hunting benefits species by giving economic value which, in turn, stimulates conservation measures.

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ENDANGERED SPECIES ACT PROPOSED AMENDMENT NO. 4

Amend 16 U.S.C. 1532(10) by striking the present text and substitute therefor:

"The term 'import' means to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, from any place not subject to the jurisdiction of the United States to any place subject to the jurisdiction of the United States, whether or not such landing, bringing, or introduction constitutes an importation within the meaning of the customs laws of the United States: *Provided, however,* That the term 'import' shall not include the transit or trans-shipment through any place subject to the jurisdiction of the United States of non-commercial shipments of sport hunting trophies of fish or wildlife lawfully exported from the country of origin or country of re-export and destined to a country where they may be lawfully received, while such sport hunting trophies remain in United States customs control."

Explanation

Under the statute, the definition of the term "import" could be applied to movement of fish or wildlife or plants from Alaska (Hawaii, Guam, etc.) to the contiguous United States because of the nonapplicability of United States Customs Law. Such a broad definition was apparently intended to cover situations in which certain wildlife, such as fowl or swine, are brought into this country and an "importation" within the meaning of the United States customs laws does not occur until the wildlife has undergone a quarantine period and has been cleared formally for entry by the U.S. Customs Service. (See S. Rep. No. 97-123, 97th Cong., 1st Sess. 5 (1981)).

The proposed amendment would eliminate any possible misapplication and discrimination of the term "import" to shipments from Alaska, etc. to the contiguous United States, while retaining the provision in the statute which provides for the quarantine importation periods in order to prevent outbreaks of disease, including Newcastle disease.

Secondly, it had been the policy of the United States Fish and Wildlife Service, in cooperation with the United States Customs Service, to seize non-commercial foreign shipments of sport hunting trophies which were taken legally in the country of origin, exported legally from the country of origin or re-export, an destined to a country where such sport hunting trophies may be lawfully received and possessed, if such species was listed as "endangered" under the Endangered Species Act. Such intransit foreign shipments through the United States had been considered to be in violation of the Endangered Species Act.

Recently, however, in recognition of such accidental landings of sport hunting trophies into the United States, the Department of the Interior issued new law enforcement directives which state that such non-commercial foreign shipments of sport hunting trophies of species listed as "endangered" under the Endangered Species Act intransit through the United States shall not be seized. (See Law Enforcement Memoranda 88, U.S. Department of the Interior, Sept. 4, 1981).

The proposed amendment would incorporate the new law enforcement directive into the statute. A similar and almost identical provision presently exists under the regulations implementing the convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES Treaty). Under the proposed amendment, the right to inspection would be retained by the United States Fish and Wildlife Service.

ENDANGERED SPECIES ACT PROPOSED AMENDMENT NO. 5

Amend 16 U.S.C. 1533(e) by striking the present text and substitute therefor:

"The Secretary may list any species as an endangered species or a threatened species if such species so closely resembles in appearance, at the point in question, a species which has been listed pursuant to this section: *Provided, however,* That—

(1) the best scientific and commercial data of such species available to him and after consultation, as appropriate with the affected States, interested persons and organizations, other interested Federal agencies, and, in cooperation with the Secretary of State, with the country or countries in which such species concerned is normally found or whose citizens harvest such species on the high seas, demonstrates that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species;

(2) the effect of this substantial difficulty is an additional threat to an endangered or threatened species;

(3) such treatment of such species will substantially facilitate the enforcement and further the policy of this chapter; and

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(4) no other means for training law enforcement personnel to differentiate between the species involved are reasonably available."

Explanation

Presently, there exists broad authority for the listing of species without documented regard to the true status of such species in question for no reason other than similarity of appearance. We do not object to listings for reason of similarity of appearance provided that such listings are the result of a thorough examination of the actual status of the species in question and its documented impact upon the species already listed. The proposed amendment regarding the listing of species for reason of similarity of appearance would continue to allow such listings pursuant to an examination of the best available scientific and commercial data on the species and pursuant to a study of its documented and expected impact upon a species already listed.

Moreover, it is reasonable to assume that the law enforcement personnel authorized to enforce the provisions of the statute should be capable of differentiating among species. The statute should serve as an incentive for the United States Fish and Wildlife Service to upgrade appropriately the training of its agents so that they may be even more capable of making proper differentiations among species. Hence, the proposed amendment requires the Secretary to evaluate whether reasonable training methods are available which would obviate the listing of look-alike species.

ENDANGERED SPECIES ACT PROPOSED AMENDMENT NO. 6

Amend 16 U.S.C. 1538(b)(1) by striking the present text and substitute therefor:

"The provisions of this section shall not apply to any fish or wildlife held in captivity or in a controlled environment on December 28, 1973, or on the effective date when such species of fish or wildlife is first listed by the Secretary pursuant to final regulation, if the purposes of such holding are not contrary to the purposes of this chapter; except that this subsection shall not apply in the case of any fish or wildlife held in the course of a commercial activity. With respect to any act prohibited by this section which occurs after a period of 180 days from December 28, 1973, or after a period of 180 days from the effective date of such first listing, as the case may be, there shall be a rebuttable presumption that the fish or wildlife involved in such act was not held in captivity or in a controlled environment on December 28, 1973."

Explanation

Presently, it is possible that an argument could be made that if a species is listed as "endangered" under the Endangered Species Act for the first time in 1982, the prohibitions pursuant to Section 1538(a) of this title could apply to such species effective December 28, 1973 as opposed to the date of its actual first-time listing. Hence, the proposed amendment merely seeks to clarify the statute to ensure that it is consistent with notions of due process and the prohibition against ex post facto laws.

ENDANGERED SPECIES ACT PROPOSED AMENDMENT NO. 7

Amend 16 U.S.C. 1538 by adding new clause (b)(3):

"Except as prohibited by subsection (c)(1), this section shall not apply to sport hunting trophies of fish or wildlife taken lawfully as part of a conservation or management or culling program maintained for purposes not contrary to the purposes of this chapter: *Provided, however,* If such fish or wildlife is not subject to the provisions of subsection (c)(1) but is listed as an endangered species pursuant to section 1533 of this title, then the provisions of this section shall apply to such fish or wildlife, except as provided in section 1535(g)(2) and 1539 of this title."

Explanation

At the present time, there are many wildlife species which are listed as "endangered" under the Endangered Species Act which may be legally taken by a sport hunter in the country of origin, and may be legally exported from the country of origin or the country of re-export, as part of a wildlife conservation, management or culling program. However, due to the listing of the species as "endangered" under the United States statute, any importation into the United States of the sport hunting trophies of such species is prohibited.

Two examples of foreign species listed as "endangered" under the Endangered Species Act which may be legally taken as sport hunting trophies from game-breeding ranches in South Africa are the bontebok antelope and the southern white rhinoceros. Recently, the United States Fish and Wildlife Service began a review proce-

dures of applications for the importation of sport hunting trophies of both species. Provided such trophies are legally taken from the aggressive and highly successful breeding programs in South Africa, such permit applications are being approved. Moreover, the leopard is an example of a non-captive foreign species which until March 1, 1982 had been listed as "endangered" under the Endangered Species Act, yet it could have been taken legally as sport hunting trophies throughout many of the nations in southern Africa.

The proposed amendment gives recognition to the conservation effects of sport trophy hunting without impinging upon the international obligations of the United States under the Convention on International Trade in Endangered Species of Wild Fauna and Flora ("CITES Treaty"). In the case where a species is listed as "endangered" under the Endangered Species Act and is also listed under the CITES Treaty, ownership of a sport hunting trophy of such species would be restricted to instances where the proper permit pursuant to the regulations of the CITES Treaty has been obtained. In the rare case where a species is listed as "endangered" under the Endangered Species Act but is not listed under the CITES Treaty, ownership of a sport hunting trophy of such species would be restricted to instances where the proper permit has been obtained from the Secretary.

In any event, in recognition of the valuable conservation effects of sport hunting, it is only legally taken sport hunting trophies which are involved. It is hoped that the effect of the proposed amendment would be to encourage foreign nations particularly to undertake aggressive wildlife management efforts to stimulate conservation programs in those nations.

ENDANGERED SPECIES ACT PROPOSED AMENDMENT NO. 8

Amend 16 U.S.C. 1538(g) by striking the present text and substitute therefor:

"It is unlawful for any person subject to the jurisdiction of the United States to attempt to commit any offense defined in this section."

Explanation

The proposed amendment would make the Endangered Species Act analogous to Section 3(a)(5) of Public Law 97-79 (the Lacey Act Amendments of 1981) by deleting language on solicitation and causation as such provisions are unnecessarily repetitious of Section 2(b) of title 18, United States Code.

ENDANGERED SPECIES ACT PROPOSED AMENDMENT NO. 9

Amend 16 U.S.C. 1540(a)(1) by striking the last sentence therein and substitute therefor:

"... The court shall have jurisdiction to hear and decide any such action. In hearing such action, the court shall have authority to review the violation and the assessment of the civil penalty de novo."

Explanation

At the present time, the Endangered Species Act uses a substantial evidence rule but as the debate on Public Law 97-79 (the Lacey Act Amendments of 1981) made clear, the Congress found merit in the position that the Court should be able to make its own determination of fact. The purpose of the proposed amendment is to conform the proceedings of civil penalty review in the Endangered Species Act to that section in Public Law 97-79.

Mr. BREAUX. Thank you, and thank all the members for their presentation and being with us this afternoon on this subject.

Mr. Bohlen, I am not familiar with the Western Hemisphere Treaty. Perhaps I should be. You are the first person that brought it up. You believe we should be paying a lot more attention to it. I thought the CITES Treaty took care of all these situations.

What is the Western Hemisphere Treaty all about? I have to apologize for admitting that I am not familiar with it.

Mr. BOHLEN. The reason I brought it up, Mr. Chairman, is because it was mentioned in this act when the act was passed in 1973 and implemented by this act.

Mr. BREAUX. I had to check to see if that fact was true and you are right, it is mentioned.

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What does it do that is not being done by CITES?

Mr. BOHLEN. CITES, as you know, can only address species that are endangered or threatened by commercial trade. We have a great many species and the one I am most concerned with now are the migratory birds that winter in Central and South America and summer here and in the North. These species are not yet at the point where they are threatened with endangerment, but many of us foresee that time is not too far off for some of these species, because we have a horrendous rate of cutting of the tropical forests, and without those forests to serve as their winter habitat, and without the food supply provided in and around those forests, it is clear to some of us that the situation may well change in the next few years.

I guess what I am advocating is that we should use a vehicle like the Western Hemisphere Treaty to foster international cooperation to save species like this before they get to the point where we have to invoke the Endangered Species Act or CITES.

Mr. BREAUX. The basic purpose of that is to address the problems before they become so severe as to fall in the CITES section where they are endangered or threatened?

Mr. BOHLEN. Yes, sir.

Mr. BREAUX. Has not a lot been going on in this area?

Mr. BOWMAN. Very little. There was between 1977 and 1979 a series of five meetings organized by the OAS, and since then there has been a resounding silence. I think there is a need for the Department of State to affect a little leadership here and bring these parties back together and see what can be done to get further international cooperation.

I feel from my limited personal experience dealing with some of these countries that they are increasingly interested in doing something to conserve their habitat and species and I think a little nudge from the State Department would be enormously helpful.

Mr. BREAUX. You were here this morning when we had the discussion on the cat situation, where the cat was listed on the CITES. There was also a discussion as to the amount of material presented in the listing. I think you are familiar with that period of history.

Would you elaborate on your feelings regarding the listing of species with a great deal, apparently, less information available than that which it would take to have that listing changed or modified?

Mr. BOWMAN. Mr. Chairman, I have put bobcats out of my mind for about 5 years, but in trying to dredge back in my memory this morning when I heard the testimony given, I was in charge of the delegation that went to Berne in 1976 at which the full cat family was listed. It seems to me our intent at that time was not to imply in any way that the bobcat was threatened, not to in any way infringe on the States right to manage it, but we recognized that with the other species of cats having already been listed under CITES that species such as the bobcat could be subject to intensified pressure to fill the vacuum in the marketplace.

Our principal intent then, as I recollect it, was to install some sort of monitoring system, so we could see if there was an alarming increase in the number of pelts entering international commerce that we would have a means of detecting that and therefore, if that proved to be the case, to take some sort of remedial action.

Mr. BREAUX. There was some further discussion this morning with regard to the import and export licensing requirements, regarding reporting on trade and species that are neither endangered nor threatened. There was some feeling that that reporting was not essential or necessary because it did not give us any help in monitoring the species that need monitoring.

What are your thoughts on that?

Mr. BOWMAN. Well, I am opposed to, in principle, any unnecessary paperwork. But as I recall the facts back then, we had virtually no information on the status of bobcats. When someone this morning said we had two pages of data, I suspect that was a generous estimate. I do not recall much of anything in the way of reliable information. I think that is what added to our concern and why we thought perhaps it was desirable to have some sort of monitoring system.

I am not exactly answering your question because I do not recall the discussion on permits at that time, but I guess what I would like to see is our Government have some sort of national system for monitoring a species like this with a minimum of redtape.

Mr. BREAUX. Concerning your industry's perspective on the import licensing requirements and reporting requirements, what experience have your people had in this area?

Mr. MEYERS. Since December 1980 when the new reporting requirements became effective, industry has maintained substantial amounts of useless data. We expect to report data on CITES and other listed species—that has not been a problem. But to maintain detailed data on goldfish exported to Canada or on all of the fishes that are captive-bred, has produced a lot of paperwork and to the best of our knowledge nothing has ever been produced—it is virtually useless.

Our feeling is that the Department could possibly exempt certain species reports and still require the people to keep internal inventory records. We should only submit reports on those species listed under the act or CITES.

Mr. BREAUX. Are you having a problem in your industry? You spoke of consolidating the list. Is there a problem determining the species endangered or threatened or subject to Federal regulation? I find that an intolerable situation if in fact it exists.

Mr. MEYERS. I gave an example of one situation in my testimony where a fish and wildlife law enforcement agent picked up only one of two applicable lists and informed its importer that all he needed was a CITES permit. If he had checked the Endangered Species Act list, he would have also said, you can't import it at all for commercial purposes.

There are six Federal wildlife lists. What we have advocated is some form of consolidation so one can go to a single source and be able to tell exactly what set of permits or regulations are applicable.

Mr. BREAUX. You feel that is a proper function of the Interior Department as opposed to someone doing it on a private commercial basis and just making it available?

Mr. MEYERS. The only problem with its being done privately is the due care argument. However, I believe, as I urged the Department, it could establish some guidelines and then I believe a pri-

vately published consolidated list is feasible, and hopefully between industry and that association it could be published.

Mr. BREAUX. Mr. Smelser, with regard to Safari International and your members' concerns, what would you say is the principal problem that you see adversely affecting the folks that are involved in big game hunting internationally? Is it a problem of taking trophies in foreign countries and trying to bring them back? Is that where you run into a lot of problems?

Mr. SMELSER. I can only quote one of the predicaments which arose in Chicago 2 years ago. It was a major problem.

We had a large shipment of wildlife trophies tied up due to a misunderstanding with the paperwork coming out of Sudan. The U.S. Fish and Wildlife Service recognized paperwork from Khartoum, but of course all of the hunting is conducted in the lower part of Sudan, which is run by another government.

They have two governments in Sudan. Consequently, we had the paperwork from Juba, not Khartoum, and this created a big problem, tying up all of our trophy shipments, so we had to meet with the U.S. Fish and Wildlife Service in Chicago. We were able to have the trophies released but, in the meantime, it involved an awful lot of expense.

Mr. BREAUX. Your members are basically involved in hunting safaris which are set up by commercial people involved in setting up these type of trips. I take it that they are not setting up trips to go out and hunt threatened or endangered species if it is a threatened or endangered species in that particular country. But your members would be prohibited from importing any game or trophy taken in that country even if legal in that country and bringing it back to the United States if it was on the endangered species list.

Mr. SMELSER. That is right.

Mr. BREAUX. You are not trying to get that changed?

Mr. SMELSER. No. We are trying to change some of the problems that arise at the United States border when we import trophies not on the endangered species list, Customs officials could perhaps be more capable of identifying these species without having to tie up entire trophy shipments of different members.

Mr. BREAUX. We have the same type of problem with regard to Mr. Lieber bringing in reptile skins, et cetera. I will ask him about that in a moment. Would not the exporting country that the game was taken in certify that the game was taken under such and such a circumstance and that in fact it was legal within that particular country? That is not accepted by our Fish and Game agents at the port of entry?

Mr. SMELSER. What happens is you are over there hunting and they do have an accepted form to fill out that is supposed to accompany your shipment of trophies. You have left the country, and left your trophies in a hunting camp, and so you are at the mercy of some of the governments there to see to it that these forms were signed and accompanied your shipments so when the trophies arrive here they are not confiscated. It does not always happen, and the regulations to allow us to have a little bit of leeway there for it to be checked out at a later date rather than to confiscate it would certainly help a lot of members. It is just a regulatory problem at Customs.

Mr. BREAUX. Mr. Lieber, your industry has had many problems that I have been made aware of and have been following for a number of years. How is the situation working today with regard to the importing of reptile skins that are processed or tanned in foreign countries? What kind of problems are we experiencing to date?

Mr. LIEBER. There is definitely a problem of identification, as you said. Within the Federal Government there are very few experts who are capable of identifying skins, and once those skins are turned into manufactured goods, it is almost impossible for them to do so. So they have often seized merchandise and skins and then have identified them at a later date properly and then we have had them returned, and a great deal of trouble has been caused by that on both sides, both from the side of the importer or from the exporter and from the side of the retailer who has intended to sell the merchandise.

Mr. BREAUX. Is it a requirement that when skins come into the United States from a foreign country that they be accompanied by documentation indicating that they come from a particular tanner and these are American alligator as opposed to a crocodile skin?

Mr. LIEBER. The American alligator, there is a tag which is not removed until it is turned into a finished product. When that reimported skin comes into the United States the tag is on it, so there is little problem with the American alligator. However, there is a difficulty with foreign skins such as the novaginn and jenny. It is sometimes identified as coming from Africa or another source which is not permitted in America. However, we are trying at this point to institute a system of certification in which the experts will go into European tanneries and factories and certify those skins and the products so that when they come into the States, they will be permitted to be imported without the various hassles that they have been suffering.

Mr. BREAUX. What about the products that are tanned and manufactured in the foreign country and then imported into the United States as a finished product? It is pretty difficult to determine a finished product being an acceptable skin or one that might be on an endangered species list, is it not?

Mr. LIEBER. It is extremely difficult to identify a finished product because many of the identifying marks are removed when the skin is cut up into the manufactured product. And also we have a great deal of difficulty with our State governments. They have even less expertise than the Federal so-called experts and very often they will seize finished product.

For instance, in New York at the New York store of Lord & Taylor, a number of State wildlife enforcement officers walked in with their guns on their hips—they all seem to wear guns, I do not know why—and threatened to kick in the showcases if certain bags and belts, wallets and so forth were not delivered to them forthwith, and no matter how the officials of the store protested, they seized the goods.

All these goods were returned to Lord & Taylor after a number of months, which represents quite a loss, and there were no apologies given with the exception of the Federal Government, which

apologized for the fact there was a Federal law enforcement agent among that group.

The same thing is happening now in California where the Californians also with guns on hip seem to have walked into the fashionable shopping areas of Rodeo Drive and Neiman-Marcus and have seized a great number of finished products, about 50,000 dollars' worth, and they are now fining those particular retailers for having ignored or having mistakenly tried to sell merchandise which under the particular law of California have not been legal. This is what we want the Federal Government to do, to preempt those particular laws so that we can have a uniformity throughout the United States.

Mr. BREAU. It is a problem. I am familiar with the situation that happened in New York, and it is a totally unacceptable method of handling a situation regardless of whether the products were legal or illegal. Most of them were in fact legal, but that is still an unacceptable way for law enforcement officers to operate.

I am also familiar with the situation that occurred in my home State of Louisiana and New Orleans where a number of purchases were seized that had been documented as coming in as legally finished alligator products, and come to find out that some of them if not all were in fact crocodile products.

We do have a problem, and I know that industry has offered to try and assist by helping the Fish and Wildlife Service to set up a labeling mechanism on products before they leave the exporting country. Industry has offered to help pay for the service, which I think is necessary to preserve the integrity of the whole operation.

Thank you very much.

Mr. Forsythe.

Mr. FORSYTHE. Thank you, Mr. Chairman, and I thank the panel.

Back to the bobcat—it seems to be the topic for the day. I put them on the list because it might be future pressure that creates the problem, why are we not trying to put everything on the list, if we use that philosophy?

Mr. BOHLEN. Well, I think you have a special case here in that so many of the world cats were on the list and obviously those skins, those species that were unprotected were going to have much greater demand in the marketplace. I think in many cases this is going to happen.

Mr. FORSYTHE. A more specific question perhaps is—under the Berne criteria, could those cats have been added to the list?

Mr. BOHLEN. My memory is not that certain on the criteria, but I would guess that we adopted the criteria for future use, not the use at that meeting, so that in all probability it would have been difficult to list the bobcat for that reason.

Mr. FORSYTHE. These three were in that category at that point.

Mr. BOHLEN. We discussed at lunch some way out of this. I mean, clearly in my mind this is an issue that has been blown all out of proportion. It does not deserve the time and money that has gone into it, and it has become so divisive between the States and the Feds and we need to put this issue aside and get on with a united effort in protecting these species. I hope the subcommittee will be able to find a way to do that. I wonder whether it would be helpful to put the bobcat on appendix III instead of on appendix II. I do not

think this country has ever used appendix III, but as I recall, the use of it would require an export permit and give us a means of monitoring the trade without in any way implying that it is threatened or infringing on a State's rights to manage this wisely.

Mr. FORSYTHE. That certainly is a suggestion that may have much merit. The issue centers around one word in the decision, and that is "reliable" in terms of population estimates, which can have many interpretations. I think we ought to get it behind us rather than have it a major issue. I am intrigued that the Secretary be authorized to fund technical assistance to foreign states under the act, and how much of this kind of a program would you envision, and what kind of costs are you talking about?

Mr. BOHLEN. I would have no idea. The need is infinite. There is so much that can be done if this country is willing to put the resources into it in providing technical assistance to the other countries, particularly in this hemisphere. Obviously the State agencies have a lot of expertise that could be very helpful. They need some encouragement.

Mr. FORSYTHE. Mr. Lieber, I commend you on the willingness of the industry to try and arrive at this kind of a certification program to largely eliminate the problems at source rather than have them face you at the border. Is the industry really getting together to bear the burden of this certification?

Mr. LIEBER. We certainly would like the Government to bear it, but as you have stated previously, that would be like looking for pie in the sky. So our industry will, even though it is a small one, do its best to bear the financial burdens of this precertification program.

Mr. FORSYTHE. It seems to have the potential of major savings so far as the industry is concerned, and therefore is far better than where you are now.

Mr. LIEBER. I agree with you, sir.

Mr. FORSYTHE. Has the industry made any attempt with these New York and California laws to try and get a better situation there?

Mr. LIEBER. Mr. Forsythe, it is very difficult to have the States change any of their laws just as much as it is to have the Federal Government change them. They are very jealous of their prerogatives, and we feel our best avenue of address is to have the Federal Government preempt those laws.

Mr. FORSYTHE. I do not know that there is a lot of mileage here to do the reverse of what now exists, that the States can use stricter standards than the Feds, but to turn that around.

Mr. LIEBER. We feel if we have no alternative we will go to law to have it changed.

Mr. FORSYTHE. I think, Mr. Chairman, that I do not have further questions.

Mr. BREAUX. Congressman Evans, questions?

Mr. EVANS. Thank you, Mr. Chairman.

Gentlemen, thank you for being with us this afternoon. I am sorry I was not able to be here this morning.

Let me suggest, Mr. Smelser, one thing before I start. Sudan does only have one government headed by President Nimeiri, a former chairman of the Organization of African Unity. It is true that the

southern part of Sudan around Juba is entirely different from the northern part, which is more oriented to the Arab world than to the traditional African world. But there is one government. They have probably 200 or 300 different dialects they speak in the country. It is the largest country in Africa, a tremendous potential agriculturally, a tremendous number of problems. Per capita income is \$236, and it is hot as the dickens in the middle of winter, 119 degrees average per day. As of yesterday they did have only one government.

I just wanted to correct that for the record, and I would like to congratulate you also in terms of what you are doing to help with habitat areas. I agree with you that sportsmen are not the primary reason that some of our species are endangered. I think poachers play a very important role, unfortunately in a negative way, and the deterioration of the habitat areas. You said your club had contributed over the last decade about \$1 million, and you have 100,000 members, that comes out to about 10 cents a member. Maybe you could up that 10 cents to a dollar or two, and we could really help the habitat areas.

I do congratulate all of you for what you are attempting to do. Mr. Bohlen, let me ask a couple of questions. There is disagreement on whether it is necessary to list those foreign species that are listed under CITES. I wonder whether you might elaborate on the benefits of listing foreign species on our own domestic endangered species list, because there seems to be a difference of opinion. I think many issues that we face are global in nature, and what we do here can be—can affect what some other country might do, not only in our immediate area, but throughout the hemisphere. Would you like to elaborate on that, please?

Mr. BOHLEN. Well, I addressed in my testimony the listing of foreign species, the merits of that under the act, but not the specific question of why we should list species under our act that are covered under CITES. In most cases, I think if you look back at history you will find that they were listed under our act before they were listed under CITES, and because CITES can only address species that are jeopardized by international trade and because it takes a consensus of all the nations to get them on an appendix, it used to be that we could act faster under our Endangered Species Act in the days when we had the will to do that, and I think in many cases we by putting them on our list, we demonstrated to the world that these species were in jeopardy, and our action encouraged others in the host governments, host countries, to rally their forces to take action. I guess one example would be the whales. They were put on our endangered species list in 1969, and I—if my memory serves me correctly, a lot of those whales were not added to the appendices of CITES until last year. So there can be a terrific time lag when economic or political interests affect such actions.

Mr. EVANS. I appreciate your comments, and I support them. I also would say that we can be rather shortsighted in fiscal policy at times and do things that are pennywise and dollar-foolish. Taking a look at the international scene and the agreements that we can reach, it seems to me that it is important to promote them, to promote these international agreements that have an impact all over

the world and certainly have an impact here. We are the leaders, and I think we have the responsibility to be leaders as a nation.

Let me say that I appreciated your comments on the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere and the potential for this convention to facilitate the integration of conservation and development in the Caribbean and Latin American regions. Since we ratified this convention as a nation, are you aware of any attempts to negotiate migratory bird agreements with parties other than Mexico? I have always felt that it was kind of ridiculous to have a limit on canvasback ducks, of one, or have it eliminated altogether in terms of hunting, and yet those same ducks would migrate south to Mexico and they would be slaughtered by the hundreds and the thousands. I think it is important to negotiate these migratory bird treaties. Is there anything going on with any countries other than Mexico?

Mr. BOHLEN. Since the Mexican treaty was signed, we have only had the treaty with Japan and the one with the Soviet Union. As far as I know since then there has been no effort to negotiate any others.

Mr. EVANS. I hope there will be some efforts in other areas. I must say that I agree with my friend the Under Secretary of State, Jim Buckley, when he was talking about high rates of extinction, and permitting them to continue, and how this was worse than burning books. It involves books yet to be deciphered and read, and it also involves protecting for the future, I think, those things that we have a responsibility to protect. I was a Boy Scout years ago, and I remember reading Baden-Powell, who wrote guides to scouting while he was under siege in a war town during the war, he said we are guests of the animals and the birds, and we should help them.

Thank you, gentlemen.

Thank you, Mr. Chairman.

Mr. BREAUX. I thank the panel for their presentations. I look forward to working with you as we develop the legislation. Thank you.

We will next hear from the scientific panel composed of Dr. Tom Eisner, professor of biological sciences, Cornell University, and Dr. Peter Raven, director of the Missouri Botanical Gardens.

Gentlemen, we welcome you and are pleased to receive your testimony this afternoon.

Dr. Eisner, we have you listed first. Please proceed.

STATEMENTS OF THOMAS EISNER, PROFESSOR OF BIOLOGICAL SCIENCES, CORNELL UNIVERSITY, AND PETER RAVEN, DIRECTOR, MISSOURI BOTANICAL GARDENS

Mr. EISNER. I would like to defer to my colleague.

Mr. BREAUX. Dr. Raven.

STATEMENT OF PETER RAVEN

Mr. RAVEN. Mr. Chairman, members of the committee, I am Dr. Peter Raven, director of the Missouri Botanical Garden. I am a member of the National Academy of Sciences and the president of the Association of Systematics Collections, the organization that

produced the coordinated listing of Federal and State regulations that Mr. Meyers mentioned.

Speaking for the Association of Systematics Collections I would like to mention that we shall be delighted to continue to collaborate in this effort with the Fish and Wildlife Service as may be required or desirable.

I would also like to say that I am speaking with the endorsement in principle of the American Institute of Biological Sciences, which is a consortium of 40 scientific societies with an aggregate membership of about 80,000 members.

If I may, I would like to begin my testimony today with an example of a familiar group of plants, the evening primroses (*Oenothera*). I have been engaged in research into these plants for more than 20 years, with the support of the National Science Foundation; hence, I hope my interest in them will be understandable. The evening primroses are wild plants, mostly with yellow or white flowers, that occur in natural places and along roadsides throughout the United States. Some 60 kinds, or about half of the world total, occur in our country. Until recently, they have been prized mainly for their attractive flowers which, for the most part, open in the evening.

Two of the evening primroses, the Eureka Dunes evening primrose (*Oenothera avita* subspecies *eurekensis*), and the Antioch Dunes evening primrose (*Oenothera deltoides* subspecies *howellii*), are federally listed as endangered. A critical habitat for the latter, which has been the subject of a U.S. postage stamp, has been designated on the dunes at Antioch, Calif. In addition to these two species, taking into account the review of endangered and threatened plant species published by the Fish and Wildlife Service in the Federal Register of December 15, 1980, and more recent findings, three additional evening primroses, the Idaho Dune evening primrose (*Oenothera psammophila*), the Arkansas suncups (*Oenothera pilosella* subspecies *sessilis*), and Wolf's evening primrose (*Oenothera wolfii*), of the coastal dunes of northern California, ought to be considered endangered, while two more kinds, *Oenothera organensis* of the Organ Mountains of New Mexico, and the recently described *Oenothera acutissima*, of western Colorado and eastern Utah, should be considered threatened.

So far, well and good. The evening primroses might, on the basis of all knowledge available until about 5 years ago, simply have been considered wildflowers and, as such, curiosities upon which human welfare most certainly did not depend. Very quietly, however, during the 1970's, commercial research began on evening primroses in the Netherlands, Germany, and England—all countries where weed evening primroses introduced from the United States abound. The reason that these neglected plants were gradually proving of interest to giant chemical concerns in Europe was the discovery that the oil in their seeds is one of the only two known rich natural sources of a nutrient called gamma-linolenic acid [GLA]. The other natural source in which GLA is abundant is human milk. GLA is a polyunsaturated fat and also an essential fatty acid. Essential fatty acids form part of the membranes that surround the cells of the body; they are essential for the proper functioning of these membranes. They are also precursors of pros-

taglandins, which are hormones that are produced by every organ of the body and control the second-by-second regulation of organ functions. It now appears that modern human populations are characterized by a widespread deficiency of essential fatty acids—a deficiency that seems to lead to many diseases that are common in our population, including eczema, diseases of the arteries, and arthritis. All of them are considered mysterious in origin, and all are resistant to therapy. It so happens that GLA is the most active of all essential fatty acids in correcting these deficiencies. In other words, oil derived from the seeds of these wildflowers may prove to play an essential role in helping us to avoid coronary heart disease and to cure such diseases as eczema and arthritis, diseases that afflict millions of people in the United States. Research in medical schools all over the world is suggesting many additional applications for GLA, and the scientific press over the past 3 months has seen a proliferation of articles on the topic. Investors all over the world are suddenly trying to find the best ways to convert a wayside wildflower into a large-scale commercial crop.

Who knows which of the evening primroses of the United States may prove to provide the richest source of gamma-linolenic acid? The Antioch Dunes evening primrose was federally listed primarily because it happened to occur in a locality where there were two species of endangered butterflies. If the butterflies were not there, development of the dunes at Antioch might have continued, and instead of allowing a chemically unknown member of a group of plants that produces a chemical that has now proved to be of intense interest to human beings to continue to exist, we might simply have had more cement manufacture from the beautiful white dunes of Antioch. Would that have been progress, and if so, for whom would it have been progress? It surely brings to mind a memorable sentence from the World Conservation Strategy recently developed by the International Union for the Conservation of Nature and Natural Resources: "We have not inherited the Earth from our parents, we have borrowed it from our children."

The Endangered Species Act of 1973 should be reauthorized and strengthened not only because we have a rich, beautiful, and valuable assemblage of plants and animals within our borders, but because we historically have been, and still are, leaders in the world conservation movement. Although we comprise less than one-thirtieth of all of the people in the world—and our proportionate representation is shrinking with every passing year—we, as a nation, have played a key role in giving rise to the conservation movement, a movement in which our leadership is needed now more than ever. Our Endangered Species Act, as well as the Convention on International Trade in Endangered Species [CITES], which were developed as integral parts of the same plan, together help to provide the mechanism by which human beings can preserve some of their options for the future. Half a century after our great early conservationist Aldo Leopold pointed out that the first rule of intelligent tinkering was to save all the cogs and wheels, some of us still have not come to appreciate the lesson. If we ignore their individual importance to us, we may regard species simply as dispensable impediments to whatever actions might seem to be called for by

the demands of the moment, instead of as unique, and therefore priceless, elements in the world's array of living things.

Plants, animals, and micro-organisms working together in complex interrelationships that are still very poorly understood make up the biosphere and worldwide web of life of which we human beings are a part. As we progressively modify this biosphere to cultivate our crops, grow our animals, and produce products of direct economic interest to us, we simplify the relationships and increase the instability of the system as a whole. As our actions promote the extinction of organisms worldwide, we lose the cogs and wheels of which Aldo Leopold spoke—the elements which, like the evening primroses, might have proved later to have been of the greatest interest and importance to our descendants.

The extinction of plants and animals worldwide is probably, as my colleague Prof. E. O. Wilson has pointed out, the most significant event that is occurring in the world during our lifetime. The reasons that this is so may now briefly be outlined.

To the current world population of about 4.5 billion people, roughly 2 billion more—a number equal to the entire population of the world in the year 1930—will be added during the next 20 years. Some 90 percent of this growth will take place in the tropics, where a majority of the species of plants and animals, and by far the most poorly known of these, occur. The World Bank has estimated that some 800 million people in the tropics live in absolute poverty at the present time, and there is little likelihood of reducing this number, even proportionately, while the populations of tropical countries double—inevitably because of their age structure—over the next quarter century. The effects of this rapidly growing population on tropical vegetation cannot be overestimated, and many of us believe that something like 1 million species, amounting to about a quarter of the diversity of life on Earth, will become extinct during the next 30 years or so—in other words, within the lifetime of a majority of those alive at the present day. This is a much greater rate of extinction than occurred at the end of the age of dinosaurs.

Many of the organisms that will become extinct in the near future might have considerable economic potential, and yet we are losing them so rapidly that we will not, in many cases, have the opportunity to explore this potential. The legumes, for example, are a large group of plants comprising some 18,000 species. The members of this group are well known for their ability to fix nitrogen, and thus make it available for the enrichment of soils. Among the legumes are many economic plants, such as peas, beans, soybeans, and alfalfa, as well as many of the newly popularized fast-growing tropical trees—trees that hold great promise in the desperate search for firewood that is increasingly characteristic of the tropics. Which of the legumes can safely be consigned to extinction? Or which of the grasses, with about 10,000 species, including rice, wheat, rye, barley, oats, corn, bamboos, and many other plants of tremendous economic importance, can we do without?

Whether we think of the biosphere as a gigantic worldwide resource for human exploitation and modification, or whether we think about the individual plants, animals, and micro-organisms that make up the biosphere as scientifically or esthetically interest-

ing or potentially useful for human welfare, the consequences of extinction can only be seen as catastrophic. We must, as a human race, try to find ways to ameliorate the consequences of this extinction, and the United States and similar developed countries must continue to provide the powerful role of leadership that they have exercised in the past in this critically important area.

No matter what we do, however, many species are likely to become extinct, and tradeoffs for human welfare may be necessary. In its current form the Endangered Species Act provides a mechanism whereby we can make those tradeoffs intelligently, deliberately, and carefully in the rare cases where they are truly necessary. The act now permits those careful tradeoffs at precisely the time when they are appropriate—when there is a demonstrable and unavoidable conflict between an economically necessary activity and the preservation of an endangered species and when all possible avenues to avoid that conflict have been fully exhausted. To try to make those tradeoffs at any earlier stage, such as at the time of deciding whether to list a species, would be foolish if not altogether impossible. Any conscious decision to push an endangered species closer to the brink of extinction, or over it, should only be made as a very last resort. Indeed, the experience with this act since 1978 demonstrates that there are very few occasions when such last resort decisions are even necessary. I have heard that some interests charge that the procedures the act imposes when such last resort tradeoffs are to be made are too awesome to contemplate because they may take up to 1 year and their outcome is uncertain. To them I can only say that it is far more awesome to me to contemplate that decisions of such an irreversible nature might be made with less care and deliberation.

The importance of preserving species diversity is too great to let the process of listing species for protection continue to crawl slowly forward, encumbered by various nonbiological considerations. That process must be expedited and based solely upon biological considerations so that we can know when tradeoffs are being made and not be blind to them. In addition, plants that have been federally determined to be endangered should be accorded the same protection as animals, and it should not be legal to take them either without specific permit procedures.

I would also like to speak, and certainly this is in line with the "new federalism" concepts of the administration, which are welcomed in many sectors of the country, for a strengthening of section 6 of the act which has already made possible 38 agreements with 38 of the 50 States regarding animals and 11 of the 50 States regarding plants, throwing a good deal of the responsibility and authority for the preservation of endangered species back to the State level and encouraging the States in their own initiatives to carry out the desirable purposes of the act. Possibly 20 percent of the total authorized under the act when it is reauthorized should be reserved for the States.

Finally, I would like to conclude, as a botanist, by pointing out the inversion of values that has crept into these considerations of endangered species.

We feel very sentimental about many kinds of big animals like the grizzly bear, the California condor, and the wolf and think of them as what we are protecting by the act.

I would like to point out, however, that plants and only plants are able actually to capture the energy of the Sun and convert it into a form where it can be used by living organisms.

There are only about 300,000 kinds of plants in the world and there are something like 15 times as many other organisms that are dependent on these plants wholly and completely, including ourselves.

It stands to reason that the extinction of a single kind of plant has the potential of bringing about the extinction of 12 to 15 or more kinds of animals and other dependent organisms and, therefore, if we are serious about the matter of protecting organisms, all of which are dependent on plants for survival, I think we need to argue that plants come first.

I can characterize as extraordinarily shortsighted efforts to delist plants, or place them down on the list, because I think this dooms the purposes of the act to failure. I can understand how kindly we might feel toward the bald eagle or the California condor, but it is plants that make their continued survival, and ours, possible. In addition, I hope that the example of the evening primroses will have reminded us of the fact that plants are themselves natural biochemical factories from which we derive many important commercial products. We have not even begun to investigate the great majority of plants for any property of potential interest, and the chemicals they contain are just beginning to be explored.

From either of these points of views, it makes obvious good sense to hold on to the plants that we have. In the United States, about 10 percent of the roughly 20,000 species of plants should probably be classified as "endangered" or "threatened" under the meaning of the act, whereas roughly half of the approximately 2,200 native plant species found in Hawaii deserve such classification. The Fish and Wildlife Service, in 1980, listed 2,999 candidates for Federal listing as threatened or endangered. During the 8 years in which the Endangered Species Act has been in operation, the Department of Fish and Wildlife has listed 61 native plants as endangered or threatened, or about 2 percent of the total. Many of the remainder will be lost if the process is not accelerated.

Some of our natural vegetation types are being destroyed far more rapidly than others, and the situation certainly deserves attention everywhere, both for plants and for animals. Preservation in nature by the delimitation of critical habitat is clearly the preferable way of preserving plants and animals, and certainly the most cost effective. If the Department of Fish and Wildlife is to function effectively in this area, it must hire a staff sufficient for the task at hand, and get on with the job of listing and protecting the threatened and endangered plants of the United States. If this is not to be the case, then alternative ways must be found to achieve these objectives while there is still time. The richest country in the world simply cannot afford to let natural resources disappear one-by-one through lack of attention or because of the im-

peratives of short-term gain. Once they are gone, we can never get them back.

The importance of the loss of genetic diversity on a world scale was clearly brought out in the Strategy Conference on Biological Diversity convened at the State Department on November 16-18, 1981. As Under Secretary of State for Security Assistance, Science, and Technology, James L. Buckley brought out in his opening remarks, we are permitting high rates of extinction to limit the potential growth of biological knowledge, and thus limiting options not only for ourselves, but for future generations. Wild relatives of domesticated plants and animals of obvious commercial importance, should receive special attention: For example, there are over 100 wild species of plants in the United States and its territories that are in fact threatened or endangered and are the wild relatives of crops of economic importance. It certainly does not require an elaborate argument to indicate why the preservation of these plants is important. A wild perennial relative of corn, recently discovered in Mexico and consisting of a few thousand plants on a hillside in the state of Jalisco, is a close relative of, and interfertile with, corn, which is cultivated over some 70 million acres in the United States—an area the size of Arizona—where about 1 million farmers grow 7 billion bushels a year, valued at well over \$20 billion. Obviously, the loss of such a wild plant has clear and immediate significance, and can easily be identified as detrimental to human interests. In addition, it should be emphasized that almost all of our crops are of foreign origin, strong reason for emphasis and funding section 8 of the act so that we may assist in efforts abroad that are of great significance for our own welfare.

We have fossil evidence that 70,000 years ago our ancestors in the Middle East used the flowers of oriental poppies, as well as those of other plants, to decorate their graves. Most of us know the large scarlet flowers of these poppies from our grandmothers' gardens, where we saw and admired them as children. Within the last decade, we have come to know that these poppies contain a chemical known as thebaine, a compound that can be transformed into the medically important codeine easily, but can be converted into the highly abused heroin only by prohibitively complex and expensive processes. Since thebaine causes convulsions at low dosage, its abuse potential is negligible. Oriental poppies, therefore, can be grown commercially to replace the cultivation of opium poppies that have contributed to such enormous problems throughout the world and here in our own country. They are now being grown commercially for this purpose in France, the Netherlands, Japan, Israel, Yugoslavia, and probably Turkey and the Soviet Union.

As a human race, therefore, we have known and admired the beautiful flowers of oriental poppies for tens of thousands of years; only within the past few years have we come to understand their agricultural and economic importance. Who can speak to the potential economic importance of the millions of species of plants and animals that coexist with us now, and who is wise enough to decree that anyone of them should be consigned to extinction? We do owe it to those who will come after us to "save the cogs and wheels," because we have learned only a small part of what we need to know about intelligent tinkering yet.

It is a fundamentally conservative position to try to hold onto what we have, and that is a point I want to make clear. In my opinion it is a dangerously radical position to ignore the importance of these organisms to our well-being and that of our children and grandchildren.

We cannot afford to passively allow hundreds of thousands of species of plants and animals to become extinct without even thinking about what is happening to us as a result of our lack of attention to them.

I am sure that, in its wisdom, this committee will take the necessary steps to preserve as many options for survival as possible for ourselves, our children, and our children.

Thank you very much for the opportunity of having addressed you.

Mr. BREAU. Thank you.

Dr. Eisner.

STATEMENT OF THOMAS EISNER

Mr. EISNER. Mr. Chairman, members of the committee, ladies and gentlemen, my name is Thomas Eisner. I am the Jacob Gould Schurman Professor of Biology at Cornell University.

I am a member of the National Academy of Science, and former chairman of the section of biology of the American Association for the Advancement of Sciences, the largest scientific organization in the United States.

I am grateful for the opportunity to appear before you today.

I am a research biologist in the field of chemical ecology. My interest is the chemistry of nature. For over 20 years, my collaborators and I have been isolating, identifying, and studying the biological properties of new chemical substances derived from animals and plants.

What is an endangered species to the research biologist? Why do those of us who work on the chemistry of animals and plants, and who can envision the benefits to be derived from such research, feel that there is such a compelling need to protect endangered species?

What I would like to do is to focus specifically on some of the practical consequences of species extinction. What benefits do we forgo, both foreseeably and potentially, if we do not stem the tide of extinction? Why, in the view of the research biologist, and specifically in the view of the chemical ecologist, is preservation of biological diversity an issue of such practical importance?

Let me deal with some foreseeable consequences first.

At the most basic level, species extinction means a reduction of biological diversity. A reduction of diversity, in turn, means a loss of some of the chemical treasure of nature. Let us not lose sight of our enormous dependence on this treasure. A large proportion of the chemicals in use in our present-day civilization were invented by nature, not by the chemist in the laboratory. Take just one example: Medicinal chemistry. It has been estimated that fully 40 percent of all prescriptions written in the United States contain as their chief ingredients compounds derived from plants, including lower plants. It was through exploration of nature that these drugs

were discovered, and such exploration has a long history of paying off.

The Incas already knew of the antimalarial properties of the bark of the cinchona tree, from which quinine was later isolated, and the foxglove plant, the well known source of the heart drug digitalis, was already in medicinal use in medieval times. But many of the most important plant drugs in current use were only recently discovered, including, for example, some of the antileukemic compounds and anticancer drugs such as vincristine, derived from a periwinkle plant and used in the treatment of Hodgkin's disease.

There is no end to the potential for discovery of this sort in nature, because we have only begun the chemical exploration of nature. Two of the compounds that I mentioned, quinine and vincristine, belong to that major class of chemicals called alkaloids. Thousands of alkaloids are now known, including many that have practical uses. Yet only about 2 percent of the flowering plants—5,000 of some one-quarter million species—have been tested for presence of alkaloids. The majority of these compounds are still unknown, locked away in the unexplored treasure of nature. We are essentially no better informed about the natural distribution of the other major types of organic compounds.

Organic chemistry, the science that deals with the isolation and characterization of natural products, has made extraordinary progress in recent times. Great simplification has occurred in the procedures by which natural products are isolated from the complex mixtures in which they occur in nature, and minute amounts of a substance often suffice for its complete elucidation. To home in on the chemical unknowns of nature is now a less laborious task than it used to be, and the prospects for discovery are at an all-time high. Yet even with accelerated exploration the increased rate of discovery could not possibly keep pace with the rising tide of species extinction. Unless the erosion of nature is halted, much of what is now unknown will vanish before it is known. I find this prospect utterly distressing.

Please note that I have emphasized the importance of plants as depositories of useful chemicals. Plants are the source of most natural products in human use, and doubtless the source of vast numbers of additional chemicals yet unknown. Their diversity must be preserved, as must that of the invertebrates, those lower animals toward which we usually show no sympathy. They are, quite literally, a vast treasure of inestimable value. In our own laboratory, for example, in the last few years, working as a relatively modest group of five to seven researchers, we have isolated (1) potential heart drugs from fireflies, (2) a cockroach repellent from a millipede, (3) a nerve drug from another millipede, and (4) shark repellents from a marine mollusk. There is really no telling what, in the line of novel biological materials, the lower animals might have to offer. Despite this, I am aware that some have proposed that plants and invertebrates be excluded from protection under the Endangered Species Act. Such proposals can be supported by neither scientific nor human welfare considerations. They reflect instead a misunderstanding of the reasons for preserving biological diversity so fundamental as to warrant the label biological illiteracy.

Let me provide a concrete example. There is a group of invertebrates called bryozoa or moss animals, that is little known even to most biologists. I happen to have a jar of bryozoa with me, should any of you wish to have a look at them.

All bryozoa are aquatic; most are marine. A chemical has now been isolated from certain of these animals about which, I venture to predict, a good deal will be heard in the months to come. The compound, assigned the designation K-112 by the National Cancer Institute, happens to be anticancer agent of extraordinary potency, effective in standard antileukemic tests at the strikingly low concentration of 35 parts per billion. When something has activity levels of one part per million, it is already something worth looking into. This is three orders of magnitude more potent. The compound is being studied by a group of chemists, including my Cornell colleague Jon Clardy, who tells me that it is an entirely new type of antitumor agent. Following its identification, synthetic programs will doubtless be instituted aimed at producing a whole spectrum of molecular variants of this particular compound. Unexpected discoveries from unexpected sources—that is the rule of the day when one searches for natural products. Who would have guessed the presence of cancer drugs in moss animals?

My final point about the consequences of species extinction concerns what may well, in the long run, prove to be the most serious consequence. It is a consequence that biologists are only now beginning to appreciate, and may need some years to appreciate in full. Let me elaborate in brief. As a result of recent breakthroughs in genetic engineering—breakthroughs which have occurred since the Endangered Species Act was passed—a species must now be viewed as more than just a unique conglomerate of genes. It must be viewed also as a depository of genes that are potentially transferrable. The technology of gene transfer, nonexistent only a few years ago, is now beyond the stage of infancy. Genes can be transferred between animals, and they will doubtless eventually be transferrable between plants. The implications of this technology are tremendous and the subject of intense current discussion. The extinction of a species, in light of these advances, takes on new meaning. It does not simply mean the loss of a single page from the library of nature, but the loss of an entire volume whose individual pages, were the species to survive, would remain available in perpetuity for selective transfer to other species. The notion that species extinction means the loss of individual utilizable genes must now be squarely faced.

Consider, for example, how this might apply to agriculture, and specifically to the improvement of plant resistance to pests. Current research in chemical ecology has shown that many plants protect themselves against insects, worms, and microorganisms by use of chemicals that they themselves produce. Many of these compounds have been identified and synthesized, and their effectiveness demonstrated in actual tests. Some, such as certain simple terpenes, are unusually effective.

Can such compounds be sprayed on plants as substitutes to conventional pesticides? Usually not, since they tend to evaporate or degrade too quickly. The reason they work for plants is that the plants produce them continuously, in the small amounts they need.

Production of these defensive chemicals is under genetic control. Suppose that one were able to transfer the controlling genes from a protected species of plant to one that isn't, thereby conveying upon the recipient the ability to produce its own defenses. Imagine being able to endow the cotton plant with the genetic capacity to produce its own repellent against the boll weevil. My prediction is that such transference of genetic capacity will be a real possibility in the future and that benefits of this character will accrue from the technology on a multiplicity of fronts.

If these are the practical consequences of preserving species diversity, then we should do everything in our power to prevent the avoidable loss of species. Two months ago I sat through a day of hearings like this in the Senate. I was struck by testimony I heard there that although the pace of endangerment and extinction is rapidly accelerating, the Fish and Wildlife Service has virtually halted the designation of species for protection under this act. There is no doubt in my mind that there are many additional species that should be protected. Indeed, numerous professional scientific organizations have already developed lists of these. If the Fish and Wildlife Service were to review these lists regularly and if it were free to base its decisions on strictly biological criteria, I think it could respond expeditiously to the clear need to identify the many additional species threatened with extinction.

The other thing that struck me about the testimony I heard in the Senate was that the complaints of industry about the operation of this act seem really quite trifling when viewed in light of the enormous public interests the act intends to serve. As I have tried to demonstrate in this testimony, what this act is really trying to do is to preserve an enormously valuable endowment for ourselves and for future generations.

You can answer the complaints of industry about permit delays and added costs by making it easier to squander and destroy that endowment, or you can reaffirm the principle this act now proclaims that the endowment will not be diminished except in the most extraordinary circumstances. If you do the latter, your grandchildren will thank you for it.

I appreciate your attention. Thank you.

[The statement of Mr. Eisner follows:]

STATEMENT OF DR. THOMAS EISNER, CORNELL UNIVERSITY

My name is Thomas Eisner. I am the Jacob Gould Schurman Professor of Biology at Cornell University. I am a member of the National Academy of Sciences, and the elected chairman of the Section of Biology of the American Association for the Advancement of Sciences, the largest scientist organization in the United States.

I am a research biologist in the field of chemical ecology. My interest is the chemistry of nature. For over twenty years my collaborators and I have been isolating, identifying, and studying the biological properties of new chemical substances derived from animals and plants.

What is an endangered species to the research biologist? Why do those of us who work on the chemistry of animals and plants, and who can envision the benefits to be derived from such research, feel that there is such a compelling need to protect endangered species?

The problem we are facing is, of course, one that needs to be viewed on a broader scale. The endangered species—the very fact that there should be endangered species in this world of ours—is symptomatic of the increasingly endangered status of nature itself. At a rate unprecedented, in the nation and throughout the world, we

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are encroaching upon nature. Species are endangered because nature itself is endangered. Species are disappearing because their habitats are disappearing.

It is not my intent here to address myself to the magnitude of the problem, staggering as it is: by the end of the century fully one million species of animals and plants now alive may be extinct. Nor do I wish to address myself to the need for an environmental ethic, essential as I feel that such an ethic is if the erosion of nature is to be halted.

What I would like to do is to focus specifically on some of the practical consequences of species extinction. What benefits do we forego, both foreseeably and potentially, if we do not stem the tide of extinction? Why, in the view of the research biologist, and specifically in the view of the chemical ecologist, is preservation of biological diversity an issue of such practical importance?

Let me deal with some foreseeable consequences first. At the most basic level, species extinction means a diminution of biological diversity. A diminution of diversity, in turn, means a loss of some of the chemical treasure of nature. Let us not lose sight of our enormous dependence on this treasure. A large proportion of the chemicals in use in our present-day civilization were "invented" by nature, not by the chemist in the laboratory. Take just one example: medical chemistry. In the United States it has been estimated that fully 40 percent of all prescriptions written in the United States contain as their chief ingredients compounds derived from plants, including lower plants. It was through exploration of nature that these drugs were discovered. And such exploration has a long history of paying off. The Incas already knew of the antimalarial properties of the bark of the cinchona tree, from which quinine was later isolated, and the foxglove plant, the well-known source of the heart drug digitalis, was already in medicinal use in medieval times. But many of the most important plant drugs in current use were only recently discovered, including, for example, some of the antileukemic compounds and anticancer drugs such as vincristine, derived from the periwinkle plant from Madagascar and used in the treatment of Hodgkin's disease. There is no end to the potential for discovery of this sort in nature, because we have only begun the chemical exploration of nature. Two of the compounds that I mentioned, quinine and vincristine, belong to that major class of chemicals called alkaloids. Thousands of alkaloids are now known, including many that have practical uses. Yet only about 2 percent of the flowering plants—5,000 of some one-quarter million species—have been tested for presence of alkaloids. The majority of these compounds are still unknown, locked away in the unexplored treasure of nature. We are essentially no better informed about the natural distribution of the other major types of organic compounds.

Organic chemistry, the science that deals with the isolation and characterization of natural products, has made extraordinary progress in recent times. Great simplification has occurred in the procedures by which natural products are isolated from the complex mixtures in which they occur in nature, and minute amounts of a substance often suffice for its complete elucidation. To home in on the chemical unknowns of nature is now a less laborious task than it used to be, and the prospects for discovery are at an all time high. Yet even with accelerated exploration the increased rate of discovery could not possibly keep pace with the rising tide of species extinction. Unless the erosion of nature is halted, much of what is now unknown will vanish before it is known. I find this prospect utterly distressing!

Please note that I have emphasized the importance of plants as depositories of useful chemicals. Plants are the source of most natural products in human use, and doubtless the source of vast numbers of additional useful chemicals yet unknown. Their diversity must be preserved, as must that of the invertebrates, those "lower" animals toward which we usually show no sympathy. They are, quite literally, a vast treasure of inestimable value. In our own laboratory, for example, in the last few years, working as a relatively modest group of 5 to 7 researchers, we have isolated (1) potential heart drugs from fireflies, (2) a cockroach repellent from a millipede, (3) a nerve drug from another millipede, and (4) shark repellents from a marine mollusc. There is really no telling what, in the line of novel biological materials, the lower animals might have to offer. Despite this, I am aware that some have proposed that plants and invertebrates be excluded from protection under the Endangered Species Act. Such proposals can be supported by neither scientific nor human welfare considerations. They reflect instead a misunderstanding of the reason for preserving biological diversity so fundamental as to warrant the label "biological illiteracy."

Let me provide a concrete example. There is a group of invertebrates called Bryozoa or moss animals, that is little known even to most biologists. I happen to have a jar of Bryozoa with me, should any of you wish to have a look at them. All Bryozoa are aquatic; most are marine. A chemical has now been isolated from certain of

these animals about which, I venture to predict, a good deal will be heard in the months to come. The compound, assigned the designation K-112 by the National Cancer Institute, happens to be an anticancer agent of extraordinary potency, effective in standard antileukemic tests at the strikingly low concentration of 35 parts per billion! The compound is being studied by a group of chemists, including my Cornell colleague Jon Clardy, who tells me that it is an entirely new type of antitumor agent. Following its identification, synthetic programs will doubtless be instituted aimed at producing a whole spectrum of molecular variants of this particular compound. Unexpected discoveries from unexpected sources—that is the rule of the day when one searches for natural products. Who would have guessed the presence of cancer drugs in moss animals?

My final point about the consequences of species extinction concerns what may well, in the long run, prove to be the most serious consequence. It is a consequence that biologists are only now beginning to appreciate, and may need some years to appreciate in full. Let me elaborate in brief. As a result of recent breakthroughs in genetic engineering—breakthroughs which have occurred since the Endangered Species Act was passed—a species must now be viewed as more than just a unique conglomerate of genes. It must be viewed also as a depository of genes that are potentially transferrable. The technology of gene transfer, nonexistent only a few years ago, is now beyond the stage of infancy. Genes can be transferred between microorganisms, they are beginning to be transferred between animals, and they will doubtless eventually be transferrable between plants. The implications of this technology are tremendous and the subject of intense current discussion. The extinction of a species, in light of these advances, takes on new meaning. It does not simply mean the loss of a single page from the library of nature, but the loss of an entire volume whose individual pages, were the species to survive, would remain available in perpetuity for selective transfer and improvement of other species. The notion that species extinction means the loss of individual utilizeable genes must now be squarely faced.

Consider for example, how this might apply to agriculture, and specifically to the improvement of plant resistance to pests. Current research in chemical ecology has shown that many plants protect themselves against insects, worms, and microorganisms by use of chemicals that they themselves produce. Many of these compounds have been identified and synthesized, and their effectiveness demonstrated in actual tests. Some, such as certain simple terpenes, are unusually effective. Can such compounds be sprayed on plants as substitutes to conventional pesticides? Usually not, since they tend to evaporate or degrade too quickly. The reason they work for plants is that the plants produce them continuously, in the small amounts they need. Production of these defensive chemicals is under genetic control. Suppose that one were able to transfer the controlling genes from a protected species of plant to one that isn't, thereby conveying upon the recipient the ability to produce its own defenses. Imagine being able to endow the cotton plant with the genetic capacity to produce its own repellent against the boll weevil. My prediction is that such transference of genetic capacity will be a real possibility in the future and that benefits of this character will accrue from the technology on a multiplicity of fronts.

If these are the practical consequences of preserving species diversity, then we should do everything in our power to insure that we take every feasible step to prevent the avoidable loss of species. Two months ago, I sat through a day of hearings like this in the Senate. I was struck by testimony I heard there that although the pace of endangerment and extinction is rapidly accelerating, the Fish and Wildlife Service has virtually halted the designation of species for protection under this Act. There is no doubt in my mind that there are many additional species that should be protected. Indeed, numerous professional scientific organizations have already developed lists of these. If the Fish and Wildlife Service were to review these lists regularly and if it were free to base its decisions on strictly biological criteria, I think it could respond expeditiously to the clear need to identify the many additional species threatened with extinction.

The other thing that struck me about the testimony I heard in the Senate was that the complaints of industry about the operation of this Act seem really quite trifling when viewed in light of the enormous public interests the Act intends to serve. As I have tried to demonstrate in this testimony, what this Act is really trying to do is to preserve an enormously valuable endowment for ourselves and for future generations. You can answer the complaints of industry about permit delays and added costs by making it easier to squander and destroy that endowment, or you can reaffirm the principle this Act now proclaims that the endowment will not be diminished except in the most extraordinary circumstances. If you do the latter, your grandchildren will thank you for it.

Mr. BREAU. Thank both of you for your presentations. I appreciate the members of the scientific community appearing in the legislative process. It is something that is not your background, training, or expertise. However, I think you make a very fine presentation on the need for protecting the plants that you are interested in as research scientists.

I don't have a lot of questions to ask of you other than to comment on your basic concern which is that we have an act that is in place that you feel is sufficient as is to take care of your concerns. You are now addressing the problem that the Fish and Wildlife Service apparently is not moving to implement the act as you think that it should be.

How many plants do we have that are now listed as endangered or threatened? I saw the number 63. It is more than that, isn't it?

Mr. RAVEN. Well, 61. The Fish and Wildlife Service in 1980 listed 2,999 kinds of native plants as possibly endangered or threatened.

Now obviously inadequate information is available about a lot of those cases, but assuming that reauthorization proceeds, I feel very strongly that adequate funds need to be made available and that the will to list those plants needs to be accelerated too so that they will be listed ore expeditiously since they do provide the real basis for the existence of the animals and other things.

Mr. BREAU. I recognize Congressman Evans for some remarks.

Mr. EVANS. Thank you, Mr. Chairman. I am sorry that I have to leave. Let me say first of all, I have heard a lo of testimony here with this subcommittee, and in various subcommittees on which I serve.

I don't think I have ever been more interested or more enlightened than by the testimony that you presented, Dr. Raven and Dr. Eisner. I appreciate it very, very much.

I do believe that we have a responsibility to future generations, and we can't be pennywise and dollar foolish about that at all.

While we are addressing some crisis that happens to be apparent to us, if we forget some of the other things that we should do, then we are going to have worse crises in the future.

I just want to say that I would hope we could spread your comments around this country because it is going to be difficult to preserve the Endangered Species Act in a manner that does preserve that endowment that you talk about for future generations, Dr. Eisner, and it is going to take real education on the part of a number of people. You certainly will be in the forefront, both of you.

I wish that more members of this subcommittee and the committee could have heard you and I wish more members of the media were here to report it. I believe very strongly that plants and invertebrates should not be excluded from the Endangered Species Act and I certainly intend to do everything I can to see that they are not.

I thank you very much and thank you, Mr. Chairman. I won't talk about the Coastal Barrier Resources Act at all, because we are on endangered species. But thank you very much.

Mr. BREAU. Mr. Forsythe.

Mr. FORSYTHE. Thank you, Mr. Chairman, and I thank both of the witnesses. It truly was a very enlightening half hour of testimony. I appreciate it.

It just so happens that in a different field, but somewhat connected, I spent 2 hours last Thursday, as a matter of fact, in a cancer research lab in my own district. That is in cell culture and cell banks and I was looking at some of the very things that you were speaking about, Dr. Eisner, and Dr. Raven.

You almost get me to feeling that maybe we ought to turn this whole act upside down and start with lower rather than with the higher species. We need to worry about the lowest forms rather than the higher forms, even though we have got some seriously endangered species in those too.

It is very enlightening. I don't suppose you would agree with that proposition. I suspect you would want to say well, we have to do it all, right?

Mr. RAVEN. Correct.

Mr. FORSYTHE. Well, I think as Congressman Evans pointed out, we are going to need a lot of help in this matter, and your kind of a story needs to be heard.

Thank you.

Mr. BREAU. I want to thank both the witnesses. I think that a lot of people express the opinion that we spend far too much time on trying to save plants and these lower forms of animal life; that we should be spending that money on saving human lives or on other programs that the Federal budget is addressing. But Dr. Eisner is going through a list of the plants and the research being done and things being found as a result of that research. This research shows why it is important to do what we can to protect these plants and the value of these plants.

A lot of this work is the subject of very off-the-wall publications on how Federal Government is spending x amount of dollars researching the biological life span of some plant that no one has heard anything about. That makes it difficult for Members of Congress to go back and justify why we didn't build a new road, yet we spent \$10,000 studying the sex life of a plant.

It is hard to answer some of these things, particularly in the times of a budget crunch.

I thought your statement and the statement of Dr. Raven was very direct and on point.

We thank you very much for your presentations.

This will conclude today's hearing on the reauthorization of the Endangered Species Act. We have a second day of hearings that are now scheduled for March 8, at which time we will be taking the Department of the Interior's testimony, as well as other witnesses that are now scheduled.

This will conclude our hearing and the subcommittee will be in recess until further call of the Chair.

[The following was submitted for the record:]

STATEMENT OF ROBERT O. WAGNER ON BEHALF OF THE AMERICAN ASSOCIATION OF
ZOOLOGICAL PARKS AND AQUARIUMS

Mr. Chairman, my name is Robert O. Wagner. I am the Executive Director of the American Association of Zoological Parks and Aquariums (AAZPA). I appreciate the

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opportunity to present comments on the Endangered Species Act of 1973 on behalf of the Association's Board of Directors and our membership.

The American Association of Zoological Parks and Aquariums is the largest professional zoological park and aquarium organization in the world. AAZPA represents virtually every major zoological park, aquarium, wildlife park and oceanarium on the North American continent and the vast majority of the professional staff members employed therein. AAZPA also represents and is the official spokesman for nearly 300,000 members of various zoological facilities in their communities. Collectively, zoos and aquariums in this country annually play host to more than 100,000,000 visitors. As such, they draw more visitors than all forms of professional sports combined.

Most of our member institutions have excellent educational programs which provide information on the plight of the growing number of endangered species with which we share this planet. We believe that because of this, our members provide an important service to the general public on behalf of wildlife. Animals displayed in a proper environment in captivity can act as ambassadors for their wild counterparts, especially if the enclosure is arranged in a manner which reflects at least a portion of the animal's wild habitat and is accompanied by carefully selected educational materials. We accept as one of our responsibilities providing sanctuaries for some of the world's most endangered and threatened species. Indeed, there are some endangered species whose continued existence is in the hands of staff members of zoological parks and aquariums.

During the recent AAZPA Board of Directors Annual Meeting, the Board voted unanimously that the Association do all that it can to support the Endangered Species Act and to maintain the integrity of this landmark legislation. As the Association's chief operating officer, I am proud of our Board of Directors' position.

AAZPA has supported the Congressional intent of the Endangered Species Act since its initial passage. AAZPA has testified many times about problems the Association's members were having with various regulatory schemes promulgated by the Department of Interior and its Fish and Wildlife Service. We believe that considerable progress has been made and that the Fish and Wildlife Service, especially the Federal Wildlife Permit Office, has been responsive to the concerns expressed by the Association.

The Endangered Species Act will undoubtedly come under substantial attack during the reauthorization hearings to be held this year. A vast number of amendments will probably be offered: most of them will be attempts by users of endangered and threatened species to weaken various sections of the Act. Members of Congress will be the recipients of a considerable amount of pressure. Our Association urges Congress to do all that it can to cast aside the cries of the special interest groups and to vigorously maintain the complete integrity of the Endangered Species Act. In some isolated instances the Act may have caused problems, but the Act has been effective in providing protection to the growing list of endangered and threatened wildlife and the dwindling habitat available to them.

The number of wildlife specimens imported into this country is staggering. It is estimated that the value of legally imported wildlife and wildlife products into the United States exceeds \$330 million annually, and that is merely the wholesale value. It can be assumed that this estimated wholesale value would grow to considerably more than \$660 million retail, if not as much as a billion dollars! Information from import records indicates that in 1979 the pet industry imported nearly a half million cage birds, almost 150 million tropical fish and approximately a million live reptiles. Any weakening of the enforcement provisions of the Endangered Species Act will undoubtedly cause these figures to rise rapidly.

AAZPA urges the United States Congress to strengthen the criminal penalty provisions in the Endangered Species Act, making it consistent with the recently passed amendments to the Lacey Act. AAZPA strongly supported the Lacey Act amendments and believes that the extant criminal penalty provisions of the Endangered Species Act are entirely too weak to thwart illegal trade in protected wildlife.

The American Association of Zoological Parks and Aquariums has joined a Washington-based coalition of environmental organizations whose major thrust will be to provide testimony during the reauthorization hearings on the Endangered Species Act and to be certain that the Act's extant provisions are maintained or strengthened.

Mr. Chairman and members of the Subcommittee on Fisheries, Wildlife Conservation and the Environment, AAZPA is pleased that you have organized these hearings to provide yourselves with views on the impact of the Endangered Species Act from organizations such as ours. I respectfully request that these comments on behalf of AAZPA be included in the record.

Thank you again for this opportunity.

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STATEMENT OF THE NATURAL RESOURCES DEFENSE COUNCIL, NEW ENGLAND WILDFLOWER SOCIETY, ENVIRONMENTAL DEFENSE FUND, FRIENDS OF THE EARTH, CALIFORNIA NATIVE PLANT SOCIETY, ASSOCIATION OF WESTERN NATIVE PLANT SOCIETIES, WYOMING NATIVE PLANT SOCIETY, NEW MEXICO NATIVE PLANT SOCIETY, ECOLOGY CENTER OF SOUTHERN CALIFORNIA, NATIONAL AUDUBON SOCIETY, WAIMEA ARBORETUM AND BOTANICAL GARDEN, TENNESSEE NATIVE PLANT SOCIETY, COLORADO NATIVE PLANT SOCIETY

The organizations listed above endorse the following testimony, which focuses on those aspects of the Endangered Species Act that apply to conservation of endangered and threatened plants. The Endangered Species Act (ESA) is the most important national program intended to conserve wild plant species. While the Act has some weaknesses, principally the lack of a taking prohibition (outlawing their collection) for plants and the general requirement that an economic assessment be prepared for any critical habitat designation, the Act itself authorizes a sound and effective program. However, implementation of the Act has not been adequate, with the result that our rich natural heritage is in great jeopardy.

Plant conservation is a vital component of any natural resource management and conservation program. Plants are the foundation of almost all natural ecosystems. Only plants can convert sunlight (radiant energy), atmospheric carbon dioxide, and water into food which can be used by animals, including ourselves and our livestock. Plants also provide food and shelter to bees and other insects that pollinate our crops as well as birds that prey on agricultural pests. Along with microorganisms, plants are critical to the recycling of vital nutrients such as nitrogen. So important are plants in the web of life that Dr. Peter Raven of the Missouri Botanical Garden estimates that each extirpation of a plant species may cause the extinction of two dozen species of insects, other animals, and other plants. Clearly, conservation of rare plants is essential to maintaining healthy ecosystems.

Many individual species of wild plants have great proven or potential utilitarian value. "In short, genetic resources from wild species and primitive forms of domesticated plants and animals provide the biotic raw materials that underpin every major type of economic endeavor at its most fundamental level.

By ensuring the well-being of other life forms, we ensure our own well-being and survival." [Margery Oldfield, The Value of Conserving Genetic Resources, in press, U.S. Government Printing Office]. As Dr. Thomas Eisner stated in his testimony, the new sciences of genetic engineering only increase the value of these resources because they can soon be incorporated in unrelated species to obtain certain desired traits. Genes cannot yet be created by scientists, only used.

A quarter of all medical prescriptions sold in the United States contain one or more chemicals derived from vascular plants. Examples include Vincristine and Vinblastine, standard treatments for various cancers, which are extracted from a tropical periwinkle; digitoxin and digoxin, used to treat heart and circulatory ailments, which are derived from foxgloves. Organic alkaloids, found in an estimated 20% of all plant species, are particularly valuable in medicine; already in use are painkillers such as cocaine, anti-malarial drugs, cardiac and respiratory stimulants, bloodpressure boosters, muscle relaxants, local anesthetics, and tumor inhibitors. Other plant-derived chemicals show great promise in controlling major diseases. Endod, a compound derived from an Ethiopian plant, may help control the snails that spread bilharzia, a disease affecting 250 million people throughout the tropics. Before the Reagan Administration eliminated the program's funding in FY 1982, the National Cancer Institute screened about 29,000 plant species for chemicals with potential anti-cancer properties. [Norman Myers, The Sinking Ark, 1979, Pergamon Press.]

During the last decade, scientists have turned their attention to the evening primroses of the Oenothera genus. The scientists' interest stems from the fact that the seed of the primrose is one of two known sources for an extremely important nutrient; the other is human breast milk. This nutrient is gamma-linolenic acid (GLA), one of the essential fatty acids critical to the healthy operation of our body's cells. Many widespread and puzzling diseases - ranging from disintegration of the arteries to arthritis to eczema - now appear to be linked to a deficiency in these acids, of which GLA appears to be the strongest. Sixty species of the primrose genus are found in the United States, but two of these are already listed as endangered and five more are candidates. Scientists fear that their efforts to develop a drug to replace the missing nutrient may be hampered by these plants' precarious survival.

The presence or absence of particular plant species has been used to map geological formations, including the location of important water supplies and economically valuable minerals

such as copper deposits in Montana, [Helen L. Cannon, "The Use of Plant Indicators in Ground Water Surveys, Geologic Mapping and Mineral Prospecting," Taxon 20 (2/3): 227-256, May 1971; Cannon, "Advances in Botanical Methods of Prospecting for Minerals; Part I - Advances in Geobotanical Methods," in Peter J. Hood, editor, Geophysics and Geochemistry in the Search for Metallic Ores, Geological Survey of Canada, Economic Geology Report 31, pps. 385-395, 1971] and gold. [Oldfield, op. cit.]. Plants are also useful as environmental monitors; lichens are extremely sensitive to air pollution, and the spiderwort changes color in the presence of radioactivity.

All our crop plants were originally derived from wild plants, and their wild relatives continue to be extremely important sources of germplasm for crop improvement. Artificially induced mutations cannot replace traditional breeding programs. Only a few of the irradiated seeds contain economically useful mutations; these must be separated from the large number of failures. Effective screening techniques have been developed for some, but not all, traits. Equally important, many sought-after traits probably are controlled by complexes of several genes, but use of artificially induced mutagenesis is practical only for traits determined by a single gene. [Oldfield, op. cit.]

Wild germplasm has already made particularly important contributions to sunflower, sugarcane, wheat, rice, cotton, tomato, potato, cacao, and grape. The commercial sunflower, valued for its low-cholesterol oil, is now grown on a million acres in the U.S. It is second only to soy beans as an oilseed crop. [Oldfield, op. cit.] The sunflower has benefited from interspecific crosses with Helianthus petiolaris for increased yields and disease resistance (rust, downy mildew, and wilt) as well as genetic characteristics vital to future breeding programs. In fact, H. petiolaris hybrids accounted for more than 80% of U.S. sunflower production in the late 1970s. Other crosses with H. annuus have also increased yields, while two other species, H. bolanderi and H. rigidus, are under investigation as sources of increased protein content. [Robert and Christine Prescott-Allen, In Situ Conservation of Crop Genetic Resources, International Union for Conservation of Nature and Natural Resources, Draft for Review, January 1981]

The tomato is the most widely grown U.S. vegetable crop, with an annual value of \$900 million. Resistance to disease pathogens is crucial to the crop's success. Nearly all the resistance has been derived from crosses with two species from the tomato's South American center of origin. [Oldfield, op. cit.] Lycopersicon peruvianum is a source of particularly concentrated Vitamin C as well as resistance to nematodes and

foliage pests such as *Septoria* leaf spot and tobacco mosaic virus. *L. pimpinellifolium* increases resistance to leaf mold and wilt and, in addition, imparts a more intense red color to the fruit. *Lycopersicon chilense* and *Solanum pennellii* have great potential for increasing the tomato's tolerance of drought; *L. cheesmanii* may transmit salinity tolerance. [Prescott-Allen, op. cit.]

Another tomato relative, *L. chmielewski*, discovered in 1963, has contributed to a 2% increase in the commercial fruit's soluble-solid content; with a potential economic value estimated at \$4 million. [Hugh Iltis, Department of Botany, University of Wisconsin-Madison, pers. comm.]

Wild plant germplasm is particularly important as a source of genetic resistance to disease and pests. It is difficult to exaggerate the contribution of these improvements. Disease resistant crop varieties are grown on 75% of U.S. croplands, 98% of those devoted to small grains. Natural resistance is the only defense against many highly specialized plant parasites, including rusts, soil-borne smuts, and certain nematodes. [Oldfield, op. cit.] We have already cited as examples certain sunflower and tomato relatives. Cotton has been made less vulnerable to root knot nematode by crossing it with the wild *Gossypium barbadense* and *G. hirsutum*, while *G. armourianum* has provided resistance to Boll weevils, leafworms, and bollworms. Wild races of wheat have been the source of resistance to several important rust diseases. Various rusts destroyed 25% of U.S. bread wheat, 75% of pasta wheat production in 1954; greater resistance to these diseases has been transferred from *Triticum monococcum boeoticum* and several other species. In the 1960s, stripe rust reached epidemic proportions in areas of the Pacific Northwest; in Montana alone, losses approached 30% in some years. A wild or primitive Turkish wheat provided resistance. [Oldfield, op. cit.]

In the 1920s, Louisiana production of sugarcane was almost destroyed by a mosaic virus transmitted by an aphid. Mosaic-tolerant varieties ultimately derived from the wild Indonesian species, *Saccharum spontaneum*, saved the industry. [Oldfield, op. cit.]

Corn has also benefitted from crosses with wild relatives. Resistance to northern leaf blight has been transferred from *Tripsacum floridanum*, considered to be endangered. *Zea diploperennis*, another endangered wild corn discovered in Mexico only in 1978, is immune to five important corn diseases, including maize chlorotic dwarf virus, one of the two most serious viral diseases in the United States. No other sources of genetic immunity are known for three of these diseases.

[L.R. Nault and W.R. Findley, "Zea diploperennis - Primitive Relative Offers New Traits to Improve Corn," Ohio Report, November-December 1981.] A 1% increase in corn production resulting from improved disease resistance would translate into a \$150-200 million annual increase in the value of the U.S. corn crop. [Norman Myers, "Corn Acquires Genetic Vigor from a Wild Relative," New Scientist, 8 January 1981.]

Zea diploperennis is also a perennial rather than annual plant. U.S. crop geneticist Dr. Paul Mangelsdorf has already succeeded in producing perennial hybrids of this grass and domestic corn. While perennial corn would probably be most beneficial in warmer climates than those in the U.S. corn belt, even the non-perennial hybrids would benefit U.S. growers because of their larger root systems, which will help curb soil erosion. [Walter Sullivan, "Cross Between Corn and a Wild Relative Yields a Perennial Crop," New York Times, February 16, 1982.]

With the exception of the sunflower, all these important crop relatives are found in foreign countries. An alarming number are endangered or declining, due usually to habitat loss. In addition to the two corn relatives just mentioned, these include some races of a third, Zea mexicana; the important tomato germplasm source, Lycopersicon peruvianum; three cotton relatives, Gossypium raimondii, G. klotzianum, and G. tomentosum; and several relatives of the sunflower and squashes. [Prescott-Allen, op. cit.]

Various other plant products show promise for industrial use. Of course, we already derive rubber, numerous pectins, resins, gums, essential oils for flavors, vegetable dyes, and insecticides from plants. Additional sources for these products, and sources for new products, are in various stages of experimentation and development. Two promise to give the United States its own sources of strategically important raw materials, specialized lubricating oil and natural rubber.

The jojoba bush, Simmondsia chinensis, is a shrub native to the deserts of the American Southwest and Mexico. The plant's seeds contain an extremely high quality liquid wax, which is an essential lubricant for precision machinery operated at high temperatures and pressures. The only other source for liquid wax is the endangered sperm whale, Physeter catodon. Plantations of jojoba have been started in the U.S., Israel, and other countries; the seeds sell for up to \$4 per pound.

Natural rubber is still very valuable, despite the availability of synthetics, because of its superior resiliency and resistance to heat. For example, the rubber in the tires

of the space shuttle Columbia is 95-98% natural. Natural rubber is also a crucial component of tires for airplanes, trucks, buses, and heavy-duty farm and construction equipment, and is used for radial tires for cars. [Oldfield, op. cit.] The guayule (Parthenium argentatum), also from the Mexican deserts, once supplied 10% of world rubber production. It is now under intensive study by the U.S. Department of Agriculture, Los Angeles Arboretum, as well as Mexican and Australian agencies. These institutions are studying both genetic improvements of the plant to increase latex production and improvement of extraction and processing techniques. Should rubber production by Hevea plantations in Asia be interrupted by pests or other causes, the guayule could prove to be of world-wide rather than just regional importance.

The study of rare plant species and subspecies contributes greatly to scientists' understanding of evolution and ecological processes. Comparative physiology, for example, depends on the survival of several physiological races of a species. [William E. Brumback, Endangered Plant Species Programs for Botanic Gardens with Examples from North American Institutions, Masters thesis, University of Delaware, June 1981, pp. 26-27]

In addition to their ecological importance and practical utility, plants have been valued through the centuries for their beauty and other fascinating attributes. Many people study wild plants as a career or avocation; their interests range from common wildflowers to extremely rare species. Many others cultivate horticultural varieties that have been derived from wild progenitors. Who would deny the beauty of the fringed orchids of our bogs and wet prairies, the showy MacFarlane's four o'clock of Washington State, the Persistent Trillium of the Southeast, or the Antioch Dunes Evening Primrose? The pitcher plant's ingenious insect traps and the cactus' bizarre appearance and threatening spines fascinate us - what odd forms Nature does devise to adapt to challenging environments!

Scientists agree that any conservation program should emphasize protecting the species in their natural habitats. Only in situ conservation can assure maintenance of ecological processes vital to man's needs as well as to the survival of the species themselves. Such conservation methods are also required if man is to increase his knowledge of natural processes by the study of the species' chemical and other interactions with its environment and its evolution. Finally, in situ techniques enable us to protect species before we have discovered any potential useful attributes, i.e., to assure future options.

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Ex situ programs, such as seed banks or botanical gardens, can supplement but not replace conservation of the plants' habitat. Seeds or pollen of most tropical and some temperate species that are stored in seed banks for even the relatively brief period of 30 years will lose the ability to germinate. Periodically, the stored seed-stocks must be grown out to produce new seeds; in the process of storage and rejuvenation, make-up of the genetic stock is changed and many of the traits for which the species was selected for conservation may be lost. Furthermore, seed stocks in cold storage cannot adopt to the often rapid changes in disease pathogens and insect pests. [Oldfield, op. cit.] Nor is ex situ conservation inexpensive; the U.S. currently spends \$12 million for seed bank facilities, but those conserve only a fraction of the gene pools of a few of our crop species. This has led such experts as Hugh Iltis to say, "Seed banks may help plant breeders of today, but preserve varieties over 1,000 years? Forget it. The only thing we should do now is work like mad to help the countries with the richest flora to set aside natural parks that cannot be touched." [Ann Crittenden, "U.S. Seeks Seed Diversity as Crop Assurance", New York Times]

Clearly, most of the economic benefits our society obtains from the exploitation of wild biota are derived from the use of plant species and plant genetic resources. Despite the obvious benefits of conserving wild plant species, and the widespread appeal of many of them, this entire biological kingdom has not yet achieved equality in our conservation programs. Plants were included in the Endangered Species program in 1973, but at a reduced level of protection compared to rare animals. Consequently, rare and valuable plant species have continued to suffer declines. In 1978 and 1979, the Congress extended to plants three important provisions of the Act: authorization to establish cooperative management agreements with the States, to purchase habitat to conserve rare species, and to assist foreign governments in conserving their rare plant resources. However, the Act still does not allow the listing of geographically separate populations of plant species or regulate the "taking" of listed plant species.

Nevertheless, the Act does promise considerable protection against the major causes of endangerment, habitat destruction and overcollecting. For some plants -- cacti, carnivorous plants, some native orchids, and some alpine species -- overcollecting for the horticultural trade is an important cause of depletion. Thus, the U.S. Fish and Wildlife Service has already listed 21 species of cacti and is preparing to list another 60-70 species, i.e., over 25% of all cactus species found in the United States. All of these species are

threatened in part by overcollecting. While the Endangered Species Act does not restrict taking of listed plants, it does prohibit interstate and foreign commerce in them (§9(2)), and thus should reduce the collecting pressure considerably.

The most important cause of endangerment for plants is loss of suitable habitat, that area that provides the right combination of sunlight; water; temperature; soil nutrients, acidity, and structure; and associated species of other plants, insects, and other animals for the plant to survive. The Act protects the habitats of listed species in several ways: by requiring that all Federal agencies consult with the Fish and Wildlife Service to assure that their actions are not likely to jeopardize species' continued existence or damage critical habitat, and by requiring that all Federal agencies take positive actions to conserve listed species (§7); by creating cooperative management programs with the States (§6); by authorizing purchase of habitat (§5); and by authorizing technical assistance to foreign governments to conserve their wild plant resources (§8). The Act also authorizes actions to address other causes of plant extinction such as competition or predation by introduced plants or animals.

Unfortunately, the Act's promise has not been fully realized due to lagging implementation. Despite language in §12 authorizing "other affected agencies" to cooperate with the Smithsonian Institution in preparing the initial report on endangered native plants, the Fish and Wildlife Service did not hire its first botanist until that report was nearly completed, in May 1975. Another two years were absorbed in developing general rules to apply to listed plant species. Consequently, the first plant species were placed on the list only in August 1977. The pace of listing improved in 1978-1980, then fell off as the impact of the 1978 amendments to the listing process took effect. To date, only 63 plant species have attained protection under the Act. Not a single marine plant species has ever been studied for listing by the National Marine Fisheries Service.

Utilization of the Act's powers to conserve listed species has also lagged. Only 1 recovery program has been adopted for plant species, compared to 37 for animals; 19 plant recovery plans are currently scheduled for development, compared to 81 for animals. During this period, we have lost one quarter of the vegetative biomass of Texas wildrice, Zizania texana, a species which may be very important in the domestication of wild rice as a nutritious crop. One reserve has been purchased which benefits plants, the Antioch Dunes in California, although even that was justified by the need to conserve the butterflies also present on the site.

There has not been a single prosecution of violators of the prohibition on the interstate and foreign sale of listed plants, despite dealers' continuing to advertise protected species and inclusion of such species in lists of plants reported to the Department of Agriculture as exports. Federal enforcement agents have also failed to take advantage of the skills and knowledge of the trade possessed by various State officials, particularly those of Arizona where several of the listed cactus species are found. The Fish and Wildlife Service, which is responsible for regulating interstate trade in listed plants, has trained criminal investigators on its payroll, but has not trained them in plant identification or made clear that moneys appropriated for enforcing the Act are available for investigating plant as well as wildlife trade violations. The Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), which is responsible for controlling plant imports and exports, has still not hired plant taxonomists skilled in identifying listed species, despite the availability of funds since October 1980; nor has it assigned any criminal investigators to this program. FWS and APHIS have also failed to issue jointly regulations required by §9 of the Act to designate ports through which listed plants may be imported and exported, or to license dealers engaged in this trade (§14). Both steps are essential to effective enforcement of trade controls.

The FWS is even threatening to stop reporting plant trade data in a useable form. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) requires parties to file annual reports that record "the numbers or quantities and types of specimens, names of species as included in Appendices I, II, and III, ..." [Article VIII, 6(b)]. The United States is a major exporter of its own cacti and orchids; preliminary CITES data for 1980 show approximately 70,000 native cacti and over 6,000 native orchids exported from the U.S. Over one-quarter of U.S. cactus species are either already listed under the Act as endangered or threatened, or are candidates for listing; over-exploitation for the trade is a significant cause of endangerment for virtually all of them. Despite the obvious need for trade data on all U.S. cactus and orchid species, the FWS is considering reporting these data only by family, thus preventing any analysis of the effect of trade on the species involved.

One success in implementing the Act has been the State cooperative agreements. In the three years since such agreements were authorized by amendment of the Act, 11 States have signed formal agreements for plant conservation and 8 more have begun the process of negotiating them. Other States have

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received contracts and other forms of assistance to conserve their rare plants.

In the past year, much of the momentum gradually built up for conservation of rare plants has been lost. Funding for the \$6 State Cooperative Agreement program has been eliminated, leaving these infant programs in an extremely perilous condition. Michigan, for example, has seen its program, covering both animals and plants, cut by 90% -- from \$600,000 to \$60,000. The program enjoyed the support of substantial numbers of volunteer citizens and experts in the academic community, whose efforts saved the program thousands of dollars in consultants' fees, etc. However, continuation of an effective volunteer program requires the coordination of the governmentally funded program, which has now been severely reduced.

Listing of additional endangered and threatened plant species has come to a standstill. Since the new Administration took office, only two plants have been added, and the necessary paperwork for these was completed under the Carter Administration.

Equally disturbing, the Fish and Wildlife Service has ignored Congressional intent and the advice of a General Accounting Office report in formulating a priority system to determine which few species will be listed in the near future. Instead of treating all taxa equally and setting each species' priority by the degree of threat, the Service has attached a higher value to conserving mammals and birds. Thus, a full species of vascular plant, no matter how valuable to man, is less likely to be listed than a subspecies of mammal, bird, fish, reptile, or amphibian. The legality of this priority system is currently under review by various conservation organizations.

In the meantime, 9 species of plants which have already been proposed for listing are in limbo as a result of the virtual shut-down of the listing process. The two-year deadline for listing these species will begin coming into effect in August 1982.

Even if the present logjam is broken and these species are listed, many other plant species requiring protection under the Act will remain defenseless. Among these are plants of surpassing beauty, such as the white fringed prairie orchid (*Platanthera* (*Habenaria*) *leucophaea*). About 100 of the extremely valuable species are species in the same genus as important food crops (see attachment), and may contain germplasm that would improve the crop's yield, quality, or

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resistance to pests or climatic extremes. Considering the role that wild germplasm has already played in improving sunflowers, we are deeply concerned that 14 species of the genus Helianthus are included among the unlisted candidate species.

Many of the cactus and carnivorous plant species that are under consideration for listing have proven economic value in the horticultural trade. At present, widespread collecting threatens to extirpate them, thus destroying this valuable resource. Much of this collecting takes place on Federal land and thus diminishes the value of that land as well. Existing permit programs are difficult to enforce and have failed to control such taking. "Rustling" of cacti, orchids, and other plants has been reported from the national parks of the Southwest, Hawaii, and Florida as well as from land owned by the Bureau of Land Management and Forest Service. International trade in many of these plant species is now regulated by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Domestic trade in some is controlled by State laws in combination with the Lacey Act. However, other rare species remain unprotected because of the absence of appropriate State programs or difficulty of enforcing collection controls in the absence of a permit program. If collecting were regulated under the Act, a limited number of these plants might be used to provide propagative material that would allow the continuation of a sustainable trade by reputable dealers.

The vast majority of plant species now threatened with extinction are found in the tropics, particularly moist tropical forests. These include many species of proven or potential importance in medicine, industry, and agriculture. Indeed, the vast majority of our crops are derived from plants of foreign origin: corn from Mexico, tomatoes and potatoes from Peru, wheat from Turkey and the Middle East, etc. The causes and implications of the impending catastrophic loss of these species have been discussed by Drs. Peter Raven, Norman Myers, Paul Erlich, and others in their writings and at the recent U.S. Strategy Conference on the Conservation of Biological Diversity. While the United States has jurisdiction over few tropical areas (Hawaii is considered one of the most unique and most threatened), we can nevertheless promote conservation of these important biomes and their constituent species through full implementation of §8 of the Endangered Species Act. The first imperative is to restore the use of P.L. 480 excess foreign currencies authorized by the statute. Second, the program should be expanded to countries in addition to the four where such currencies are now available by authorization and appropriation of dollar expenditures. Failure to act to conserve these resources could undermine our own standard of

living in years to come.

In conclusion, the organizations joining in this testimony urge that the Endangered Species Act be strengthened by the adoption of the following substantive amendments:

- o extend the taking prohibition to plants listed as Endangered or Threatened;
- o require that collection from Federal lands of specimens of any plant species listed on the appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) be regulated by permits issued by the U.S. Fish and Wildlife Service;
- o authorize funding for the \$8 foreign assistance program.

We also suggest that a technical amendment is required to clarify agency responsibility for "terrestrial" as opposed to other types of plants. We further urge that vital provisions currently in the statute be retained: §7 provisions protecting species habitat; §6 authorization of State cooperative agreements; §9 prohibitions on interstate and foreign commerce; §14 requirements that importers and exporters of wildlife and plants be licensed; and §5 authorization of habitat acquisition.

As we have pointed out in our testimony, the major problems associated with the Act concern inadequate implementation. Therefore, we ask the Committee to call for adequate funding and personnel levels in all the responsible agencies (FWS, APHIS, and NMFS) to realize the inspired promise of the Act. This funding should include appropriate dollar amounts for §§6 and 8. The Committee should direct the responsible agencies to promulgate regulations required by the statute. Finally, the Committee should direct the FWS to publish a proposed priority system for comment by the public and scientific community.

The organizations joining in this testimony appreciate this opportunity to present our views to the Committee. We look forward to working with you during the reauthorization process.

Prepared by

Faith Thompson Campbell, Ph.D.
Natural Resources Defense Council
(202) 223-8210

STATEMENT OF BRYAN NORTON, RESEARCH ASSOCIATE, CENTER FOR PHILOSOPHY AND
PUBLIC POLICY, UNIVERSITY OF MARYLAND AT COLLEGE PARK

My name is Bryan Norton. I am a Research Associate at the Center for Philosophy and Public Policy of the University of Maryland where I direct a project on The Preservation of Species, funded jointly by the National Science Foundation and the National Endowment for the Humanities. I am pleased and honored to address the Subcommittee on the importance of species preservation, and the views expressed are of course my own.

Without questioning in the least the facts or conclusions presented by Dr. Raven and Dr. Eisner, I want to supplement their considerations by discussing other values derived from nonhuman species. Whereas my colleagues emphasized those values of species deriving from specific characteristics of individual species, I will emphasize the importance of all species—what might be called the total diversity of the biotic community. All species contribute to the overall well-being of the ecosystem and, consequently, are of value to humans in important, if indirect, ways.

While there remain few truly virginal wilderness areas—i.e., ones that have not felt in some way the effects of human alteration—it remains possible to rank systems and locales as more or less natural, more or less unmanaged by human intervention. Since a considerable amount of human interference is essential in order to support the present human population, ecologists agree that a healthy environment depends upon maintaining a pattern where managed residential, industrial, and agricultural areas are interspersed with natural, less managed systems. That is, a large agricultural area devoted entirely to artificially created monoculture is less "healthy," ecologically, than are mixed areas.

It is helpful in defending this thesis to explain how natural systems develop. Once the cause of some major disturbance has been removed, as when a forest fire is extinguished or a field is removed from continual cultivation, there will begin a sequence of biotic developments which will transform the disturbed area through a series of stages. While ecologists do not fully agree about how distinct and ordered these stages are, they do agree that earlier stages involve a higher percentage of opportunistic, generalist species. These species are characterized by their reproductive abilities—they have effective methods of dispersal, grow to maturity quickly, and can exist in a variety of climatic conditions. In short, they share a number of characteristics which often qualify them as "weeds" and "pests."

If the disturbance is not repeated, these species will eventually be replaced with species which grow more slowly, are larger and store more energy as biomass, and live longer. These longer-lived species lead to a more stable system as they are more able to modify conditions by, for example, creating a canopy of leaves which evens out the temperature at ground level. The species which form the community in later stages of succession will tend to be more specialized to the local conditions and will evolve interspecific relationships of predation and cooperation. As these relationships develop, there will be more and more opportunities for new species to find or create niches—each new species creates new opportunities for other species and, up to an eventual leveling-off period, a spiral of growing complexity continues.

As systems proceed through these stages, they become more self-directing and their future states come to be determined more and more by their own present internal states—they can be described as "autogenically developing systems." Species in such systems are highly interconnected in their interactions; mature systems are marked by highly developed competitive and symbiotic relationships and considerable redundancy. These create buffers against climatic and external biotic stresses. Consequently, normal fluctuations, abiotic disturbances such as floods and droughts, invasions of pests, etc. have only temporary effects. The system has evolved in the face of such disturbances and returns relatively quickly to its normal state.

As they develop and mature, systems become very efficient at equilibrating certain familiar and limited types of disturbances. This is not to say they can overcome extreme disturbances of new types such as are introduced by human technology. Evidence shows that such systems, because of the high degree of connectedness between their species, are especially vulnerable to disturbances which are not of the type or within the range of extremity to which they have become accustomed. In the face of technologically augmented human exploitation, tropical rainforests can collapse, losing not only their evolved structure, but their very productive base, the soils on which they depend.

Highly developed and mature ecosystems contrast sharply with highly managed systems, such as those of modern monocultural agriculture. Indeed, modern agriculture maintains productivity by holding back successional development, exploiting the reproductive energy (in the form of seed, grain, fruit, etc.) expended by opportu-

nistic species. By importing energy for cultivation (human labor and fuel-driven machines) and by adding nutrients (chemical fertilizers), extraordinary productivity of specific goods is achieved in monocultures.

What, then, are the benefits of more fully developed, mature systems, as compared to monocultures? While monocultures achieve great productivity of a single seed, grain, or fruit by excluding new arrivals and arresting ecosystem development, they are not closed systems. If the soil's nutrients are not replenished from outside sources, productivity will decrease. Fully developed systems, by contrast, have closed food chains in which nutrients are recycled. Energy created by the photosynthesis of plants is eaten by herbivores which are, in turn, eaten by carnivores. Meanwhile, a significant portion of the nutrients are returned to the soil as fecal material, and nutrients stored in the tissue of animals decompose and return to the soil upon their death. The longer and closed food chains of developed systems, then, create an ongoing, self-perpetuating system which builds up capital reserves of energy and nutrients.

Monocultures, on the other hand, expend this capital and can be maintained only by importing energy and nutrients. Fossil fuels and chemical nutrients taken from phosphate deposits, for example, represent the capital created by past productive systems. Monocultures are maintained on the capital of past systems which stored energy and nutrients built up as biomass produced in the closed productive systems similar to those described above.

This, then, is the greatest benefit of highly developed systems—they are reservoirs of biomass, energy, and nutrients which can be drawn upon to maintain high productivity. But it follows from this that a country or world composed purely of monocultures would give only a false and temporary appearance of productivity. Agriculturally produced bounty is supported by stored resources. If no areas are left in a natural state or allowed to return to this state, there is created a form of deficit financing of present consumption. Eventually, a monocultural world will use up the capital of the past and will no longer be able to sustain productivity. It is much wiser to set aside some areas, allowing them to remain in or return to autogenically developing, closed systems. Only then is the present generation fulfilling its obligation to replenish the supply of nature's bounty necessary for the perpetuation of human as well as other life.

Highly developed systems are important in many other ways. Being more dependent upon internal, biotic factors, they control the environment itself. A heavy vegetative cover encourages rainfall; forest canopies equilibrate temperatures on the earth below, presenting attractively cool homesites for human and other creatures. Autogenic, predictable systems provide homes for predators who can regulate populations of potential pests, avoiding the use of dangerous chemicals. Such systems also provide tertiary sewage treatment, filtering nutrients from human waste and recycling them into the food chain. Failures to maintain complex biotic communities have led to increases in environmental harshness and even to breakdowns of whole ecosystems as in the dust bowl phenomenon of the 1930s and in the expansion of the African deserts where overcultivation and overgrazing lead to decreases in rainfall.

When productivity is measured in economic terms determined by market prices, the concept is restricted to the production of saleable items, usually biomass for food, fibers, fuel, etc. But such a narrowing ignores important human values.

This point is well expressed by E. P. Odum:

Man has generally been preoccupied with maintaining as much "production" from the landscape as possible by developing and maintaining early successional types of ecosystems, usually monocultures. But, of course, man does not live by food and fiber alone, he also needs a balanced $\text{CO}_2\text{-O}_2$ atmosphere, the climatic buffer provided by oceans and masses of vegetation and clean (that is, unproductive) water for cultural and industrial uses. Many essential life-cycle resources, not to mention recreational and esthetic needs, are best provided man by the less "productive" landscapes. In other words, the landscape is not just a supply depot but is also the *oikos*—the home—in which we must live.

But it is easy to take for granted these benefits and amenities, because they are never paid for until their natural sources are destroyed. An economic analysis comparing the human benefits of an hectare of land under monocultural agriculture to the human benefits derived from an hectare of undisturbed land will favor the former. The benefits of undisturbed land are easily taken for granted, difficult to measure, deferred to future times, and so forth. But it should not be forgotten that the productivity of modern agriculture can be maintained only by drawing upon resources developed in productive, highly developed systems of past ages. Likewise, the pollution created in such high-energy production must be absorbed by areas in less intense use. Whatever the benefits of lands in high intensity use, these benefits

depend indirectly upon less easily measured benefits from less intensely managed systems of the past and present.

So far, I have argued that highly developed ecosystems are productive in indirect ways which, while difficult to measure and quantify, supplement and provide necessary support for the immediate easily harvested, and quantifiable products of highly managed systems. But what does all of this have to do with endangered species?

Systems develop by virtue of invasions by species from surrounding areas. After a severe disturbance such as a fire, species begin to colonize the disturbed area, with each species attempting to carve out a niche in the developing system. Early colonizers will be opportunistic species but, as time goes on, they will be replaced by larger, longer-living species which hold their places and modify their environment with larger biomass. The number of species available to colonize a disturbed patch is a function of the number of species present in the area. If an area is rich in species of various degrees of specialization with many adaptive strategies, the process of ecosystem development will be characterized by a high degree of competition. Those species with special talents, either to tolerate unusual climatic and abiotic factors present or to develop symbiotic relationships with other species, will gain a competitive advantage. If few species are available, the development of the system will be slower—there will be less competition, niches will be wider, and less specialization and connectance will occur. In other words, the more species available to colonize a disturbed patch, the greater the degree of ecosystem development.

If, as I have argued above, highly developed ecosystems are beneficial, individual species share in producing those benefits. Highly developed systems are dependent upon the species available in an area and even species which fail to gain a lasting foothold in the system contribute indirectly by increasing the level of competition and thereby increasing the efficiency, productivity, and connectedness of the system.

But while each species contributes to this productivity, it would be impossible, given present knowledge, to assign that value to species individually, even if one could calculate the productive value of the system as a whole.

My argument does not depend upon the classic, but now questioned, reasoning that diverse ecosystems are more stable and resilient. Rather, I have argued that a healthy, self-regenerating landscape would be composed of a variety of systems of varied types, of varied degrees of intensity of human exploitation. Only in this way are the not easily measured values of more mature, self-regulating systems combined with the obvious economic values of intensely exploited areas. But the total diversity of a geographical area, the number and variety of species inhabiting it, provide the building blocks for the development of these mature systems. Each time a species is lost, future opportunities for it to occupy a niche in a developing system are lost with it. This, I submit, is the important truth behind the concern that losses in species diversity are losses in genetic variety. And losses in genetic variety restrict future options. But the options to which I refer are not restricted to human choices. Autogenically developing systems mature by "choosing," through a process of competition, among the species which attempt to colonize. Those systems will achieve the best possible adaptation to their surrounding environment if there are a large number of species available to participate in the competition for and creation of ecological niches.

I conclude, then, that each species has a value, even if this value is not manifest in pharmaceutical chemicals, food resources, or industrial products. The values ascribed to some species, on an individual basis, by my colleagues are important examples of direct benefits we derive from nature. But I have argued that, in addition to these considerable direct benefits, there are indirect benefits as well. Each species represents a unit of the total diversity of a geographic area. As such, it is a potential competitor for space in developing and changing systems and it, thereby, contributes to the complexity and maturity of developing systems.

[Whereupon, at 3:55 p.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

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ENDANGERED SPECIES ACT REAUTHORIZATION AND OVERSIGHT

MONDAY, MARCH 8, 1982

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON FISHERIES AND WILDLIFE
CONSERVATION AND THE ENVIRONMENT,
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
Washington, D.C.

The subcommittee met, pursuant to call, at 10 a.m., in room 1334, Longworth House Office Building, Hon. John Breaux (chairman of the subcommittee) presiding.

Present: Representatives Breaux, Sunia, Hughes, Tauzin, Forsythe, and Schneider.

Staff present: Jeff Curtis, Grant Wayne Smith, Norma F. Moses, and George J. Mannina, Jr.

Mr. BREAUX. The subcommittee will please come to order.

The Endangered Species Act is one of the most important wildlife management statutes ever enacted, yet it has at the same time been one of the most controversial. It is incumbent upon Congress during the course of reauthorizing this legislation to look very closely at how this law has worked, whether it is achieving the goals Congress intended, and whether or not it needs any modification.

The hearing today will be our second day of oversight hearings on the Endangered Species Act. Our first day dealt with the concerns of the States and international issues. Today we will hear from panels of witnesses who will discuss issues involving what many people consider to be the "guts" of the act: The section 4 listing process and the section 7 agency consultation and exemption issues.

We will also hear from a panel of administration witnesses and would point out we scheduled the administration to testify last on our panel of witnesses today in order that they may have an opportunity to hear the concerns addressed and presented by the various panel members prior to their testimony, so that when they do appear, they will be in a position to respond to any concerns that have been expressed by the panels.

The listing of species is central to the act's strategy of protecting endangered species. Any species or subspecies of fish, wildlife or plants may be listed and separate populations of vertebrate species may also be listed. The Secretary is also directed, to the maximum extent prudent, to designate habitat critical for each species at the time of listing.

The listing of species carries with it a broad range of protective measures, the most important of which are encompassed in section 7 of the act.

That section mandates all Federal agencies, in consultation with the Secretary, to insure that any action authorized, funded, or carried out by that agency is not likely to jeopardize the continued existence of an endangered species or result in the destruction or adverse modification of its critical habitat.

The provisions of this section can and have stopped development projects, but in the majority of cases alternatives or modifications of the projects are adopted which allow it to go forward, although in some instances after some delay and additional expense.

For those projects where an "irresolvable" conflict exists between an endangered species and the proposed action, the 1978 amendments to the act established a process whereby the project could be exempted from the act. This process, involving an initial review by a three-member board and a final decision made by a seven-member Cabinet-level Executive Species Committee, has never been used except in two instances when Congress mandated expedited review by the Endangered Species Committee.

We have a number of witnesses appearing before us today, so we would appreciate it if the witnesses would summarize their statements in as concise a manner as possible. The statements in their entirety will, of course, be included in the record and will be considered as we move forward in the reauthorization process.

Before we hear from our first panel, I would like to call on Mr. Forsythe, the ranking minority member of this subcommittee, for any opening remarks he may have.

Mr. FORSYTHE. Thank you, Mr. Chairman.

It is obvious from the number of people in the room this morning that the interest in this legislation, as the chairman has described, is perhaps one of the most important piece of environmental legislation on our books.

I fully join him in his statement but would, in addition, also encourage witnesses to be as concise as possible so that we can get the interplay of questions on the record within the balance of a reasonable day.

It is a very important issue, and it is one that we will again try and tackle with the result hopefully not being as horrendous a process as it was in 1978. I think that kind of process does leave something to be desired, and I hope we can find a way to work together on this this year to maintain the viability of that act in a way that is respected by the people all across this land.

Thank you, Mr. Chairman.

Mr. BREAU. Before we begin I would like to repeat the same point that I made during our first day of hearings. We had received a letter to the subcommittee chairman from Secretary Watt with regard to the legislation being considered.

The Secretary said that during the departmental review we have been in contact with a broad range of groups concerned with the Environmental Species Act and, as a result, have identified several problem areas that need to be addressed.

Frankly, however, we are uncertain how to translate identification of those problem areas in this specific legislation that would be acceptable during the upcoming session of Congress.

I find that a little puzzling. If there are several problem areas that the Department has identified, it should be relatively easy to solve those problems.

Hopefully the various panel members, if they do have areas that they consider problem areas, will have recommendations as to how to correct those problems. We will be looking for your suggestions.

With that, we would like to welcome our first panel of witnesses, Mr. Michael Bean, chairman of the wildlife program; Dr. Jack Early, president of the National Agricultural Chemical Association; Mr. William Blair, president of the Nature Conservancy; and Mr. John Spinks, Chief of the Office of Endangered Species Scientific Authority with the Fish and Wildlife Service.

We welcome you and are pleased to receive your testimony. You all have a preferred way of going. Mr. Spinks, do you want to go on first?

STATEMENTS OF JOHN SPINKS, CHIEF, OFFICE OF ENDANGERED SPECIES SCIENTIFIC AUTHORITY, U.S. FISH AND WILDLIFE SERVICE; MICHAEL J. BEAN, CHAIRMAN, WILDLIFE PROGRAM, ENVIRONMENTAL DEFENSE FUND; JACK EARLY, PRESIDENT, NATIONAL AGRICULTURAL CHEMICAL ASSOCIATION, ACCOMPANIED BY DON SPENCER AND WILLIAM D. BLAIR, PRESIDENT, THE NATURE CONSERVANCY

STATEMENT OF JOHN SPINKS

Mr. SPINKS. Thank you, Mr. Chairman.

In keeping with your request, Mr. Chairman, I will summarize my testimony briefly.

The point you made in your opening remarks, sir, considering the essential nature and basic function of listing as an integral part of the endangered species program I would merely repeat.

We now have something more than 750 species listed under the act, both domestic and international species. There is basic fundamental data gathering necessary prior to listing, with the standard of the statute itself being the best commercial scientific data available.

Once that information has been obtained, the listing process itself begins. It is a rather complex administrative process, beginning with the development of a document known as a determination of effects, which combines analysis required by the Regulatory Flexibility Act, Executive Order 12291 and the Paperwork Reduction Act.

After this document has been developed and approved it is included in a proposed listing package, that can be developed and sent on the approval route. Once published in the Federal Register, a number of activities are initiated that are designed to maximize public input in the decisionmaking process. These involve public hearings or public meetings, as appropriate, depending upon whether or not critical habitat has been proposed.

After the information is gained from the public and other interested parties through the proposed rulemaking process, then a

final rule document is developed, which considers the public input. This final rule, after publication in the Federal Register, becomes effective 30 days later.

Mr. Chairman, obviously, listing is not all of the picture. Another very important activity once the species is listed is taking meaningful steps to work toward its recovery. To that extent, the Service has made a concerted effort to emphasize the recovery aspect of the endangered species program.

That particular subprogram is now being funded at approximately a \$7.5 million level in fiscal year 1982. We are hastening the development of additional recovery plans for listed species.

Basically, sir, that is a summary of my testimony.

Mr. BREAU. Thank you.

[The statement of Mr. Spinks follows:]

PREPARED STATEMENT OF JOHN SPINKS, CHIEF, OFFICE OF ENDANGERED SPECIES, U.S.
FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

Identifying and listing Endangered and Threatened species of animals and plants is the most basic function of the Endangered Species Program under the authority of the Act since species must be listed before they can receive the benefits provided by the Act. Through fiscal year 1981, 238 domestic (U.S.) species have been listed, of which 193 are endangered and 75 are threatened. In addition, 518 international species have also been listed, of which 488 are endangered and 30 are threatened. Another 11 animals and 9 plants are currently proposed for listing.

In order to maintain the credibility and effectiveness of the list, species listings, changes in listing status, or delistings must be supported by adequate, accurate, and current commercial and scientific data on the species' status and distribution. Various types of surveys are conducted to obtain this status information. For lesser-known species, actual field studies (sometimes involving the development of new survey techniques) are conducted by qualified persons to obtain data necessary for listing, change of status, or delisting. For species which have already been the subject of extensive field studies, status surveys primarily involve a thorough literature search. As a result of the 1978 Amendments, the status of each listed species must be formally reviewed at least once every five years. While one species (American alligator) was reclassified in fiscal year 1981, 18 other domestic species are expected to be reclassified (either delisted, or downgraded from Endangered to Threatened) in fiscal year 1982.

The listing process itself is a detailed procedure, which requires a number of administrative steps to assure that the public is fully informed about and involved in the proposed listing process. Once information has been obtained which is sufficient to list, reclassify, or delist a species, the following steps must be taken.

First, a Determination of Effects (DOE) must be prepared and approved for the proposed listing. This document combines the analysis of the effect of the rule that is required to comply with the Regulatory Flexibility Act, the Paperwork Reduction Act, and Executive Order 12291. The DOE includes description of the rule, its purpose, its need, information collection and recordkeeping requirements, economic effects, a determination regarding whether the rule is major, and a certification regarding whether the rule will have a significant economic effect on a substantial number of small entities. The DOE is approved by the Assistant Secretary after reviews within the Fish and Wildlife Service, Office of the Solicitor, and other appropriate offices within the Department.

After the DOE has been approved, the proposed rule can be developed. The statute requires that the proposed rule address the biological information upon which the proposal is based and the potential threats to the species. If critical habitat is also proposed, the proposed rule must describe and evaluate those activities which, if undertaken, may adversely modify such habitat, or which may be impacted themselves by such designation.

In addition to the proposed rule itself, the rule "package" also contains draft correspondence for notification of appropriate parties, a draft news release, a draft economic impact analysis if critical habitat is designated, a draft environmental document and information relating to the biological basis for the listing.

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After approval by the Assistant Secretary, the proposed rule goes to the Office of Management and Budget for review, and thereafter is published in the Federal Register.

Following publication of the proposed rule, if the rule contains proposed critical habitat a summary of the text of the proposed rule and a map of the critical habitat must be published in a newspaper of general circulation within or adjacent to such proposed habitat to assure that the affected public receives adequate notice of the proposed listing. In addition, notice must be given to all general local governments (including the test of the regulation and draft environmental document) located within or adjacent to the proposed critical habitat—again to assure adequate notice to local officials, agencies, and the public.

If the rule does not include a proposed critical habitat, a public meeting must be held if it is requested within 45 days of publication of the rule. If the rule does contain a critical habitat designation, a public meeting must be held within the area in which such habitat is located in each State, and, if requested within 15 days after the date on which the public meeting is conducted, a public hearing must also be held within each State.

While these activities are proceeding, a minimum comment period of 60 days is provided to the public, as well as a 90 day comment period for the governor of any State in which the species is found.

Following the receipt of all information generated by the public review process, an analysis is done of all aspects of the proposal including, as appropriate, the status of the species, configuration of critical habitat, economic impact, and an environmental review document. A final rule package is then prepared. After approval by the Assistant Secretary and OMB review, the final rule is published in the Federal Register, and becomes effective 30 days thereafter.

If a final rule is not published within two years of publication of the proposed rule, the proposed rule must be withdrawn. The rule may not then be re-proposed unless a determination is made that sufficient new information is available to warrant such re-proposal.

Mr. Chairman, as you know, the listing process is a necessarily detailed procedure. Our ability to list species was temporarily slowed as we have developed procedures to comply with the 1978 and 1979 amendments to the Act, and with other laws intended to assure that Federal regulations serve the public interest. However, we feel that we now have these procedures well in hand.

Through fiscal year 1981, we have appointed 69 Recovery Teams, and 46 Recovery Plans have been approved. We will continue to place increased emphasis on the recovery of listed species, for the success of the Act is really measured by the success of our recovery efforts. New Recovery Planning Guidelines were issued in fiscal year 1981 which should improve our efforts by providing for a standardization of recovery task priorities and definitions, a revised format for recovery plan implementation schedules, and a mechanism for periodic updates and revision. Forty-five of the 46 plans are now being implemented, and some \$2.6 million has been set aside in fiscal year 1982 for this important work. As a result of our emphasis on species recovery, the number of new plans developed in fiscal year 1983 is expected to increase further.

Mr. Chairman, I would be pleased to answer any questions you may have at this time.

Mr. BREAUX. Mr. Mike Bean.

STATEMENT OF MICHAEL BEAN

Mr. BEAN. Thank you, Mr. Chairman, members of the subcommittee.

My testimony is submitted on behalf of the Environmental Defense Fund and 16 other organizations identified in the written statement. I will be happy to submit it for the record and summarize its key points now.

I would like to remind the subcommittee of where we left off 2 weeks ago. You will recall that at the end of the first day of hearings, Drs. Raven and Eisner gave some very strong testimony which underscored both the magnitude of the species losses we face in the imminent future and the enormity of the potential consequences for human welfare of those losses.

That testimony also, I believe, underscored the need for an effective and expeditious system to identify species that are in fact endangered or threatened, so that we can take appropriate action to conserve them in a timely fashion.

I submit to you that as the Endangered Species Act stands today, the species that are most likely to be added to the threatened or endangered lists are those least likely to benefit from that fact of listing.

It is no accident, for example, that the only species that the current administration has yet added to either the endangered or threatened species list is a single species of invertebrate that occurs in one meter of a small spring on property owned by the National Zoo here in Washington. This is a species, the listing of which will have little or no impact upon any economic or commercial interest.

This rather anomalous result, whereby the species least likely to benefit are most likely to be listed, is not attributable solely to the fact that this administration has consciously sought to frustrate and stymie the listing process. I would add, however, that the charge that this administration has consciously sought to stymie and frustrate the listing process, a charge which Mr. Spinks himself made in December, is, I believe, true.

I do not think that is really the basic cause of the problem, however. The real cause, I believe, is that the act itself has, since 1978, virtually guaranteed the result I describe. Let me explain why.

If we are serious about protecting endangered species, we must recognize two distinct and separate functions.

The first function is to determine the actual biological status of species: are they endangered, are they threatened or are they neither?

A second function—a separate function, I submit—is to determine what we want to do about those species once we have determined that they are threatened or endangered.

The former function entails strictly a biological determination. The latter properly should reflect social and economic considerations. Indeed, the section 7 exemption process, with which you are familiar, is expressly designed to insure that social and economic considerations are carefully scrutinized.

If the distinction between the initial biological determination and the subsequent social-economic function becomes blurred, or if we lose that distinction altogether, then the listing process itself will suffer greatly.

I submit to you that the listing process has suffered greatly because that distinction has been blurred. Indeed, it has suffered nearly to the point of death.

The blurring of these functions has come about as a result of two amendments enacted in 1978, which, in tandem, have essentially destroyed the listing process. The two amendments I refer to are the following:

First is the requirement that, to the maximum extent prudent, whenever a species is listed, the Fish and Wildlife Service must also simultaneously designate its critical habitat.

Second, before any critical habitat can be designated, the Service must undertake an economic analysis of that critical habitat desig-

nation and determine, based on that analysis, whether to delete portions of the proposed critical habitat.

By virtue of those two related requirements, the listing process itself is now heavily influenced by economic considerations and is no longer guided by strictly biological considerations.

Indeed, the discretion that the Secretary now exercises at two stages—first when determining whether to propose any critical habitat at all and second, when considering the economic impacts of any critical habitat he does choose to propose—now serves as the peg upon which this administration hangs the requirement under Reagan Executive Order 12291, to do a regulatory impact analysis for major rules.

That analysis has essentially paralyzed the listing process. I believe the statistics bear out my charge.

More than 95 percent of the listing proposals that were outstanding at the time of the 1978 amendments have not yet been finalized. Indeed, 95 percent have been withdrawn. Very few have been repropoed.

Since the 1978 amendments, only one species, a single species that had not already been proposed for listing as of the time of those amendments, has been added and its critical habitat designated pursuant to the regular rulemaking procedures those amendments require.

In the current administration, not a single species has been proposed for addition to either list, and of the numerous listing proposals outstanding when this administration took office, only one of those, the species that occurs in the National Zoo that I referred to a moment ago, has been listed.

With respect to that species, I would point out that the determination that that species was biologically endangered was approved by all persons in the Fish and Wildlife Service hierarchy, up through and including the Director, as of January 1981. Yet, that species was only listed in February of this year.

Indeed, the effectiveness of that listing begins only today.

During those intervening 13 months between January 1981 and today, March 1982, the only thing that this administration did with respect to that species was to determine that the listing of that one species in the National Zoo was not a major rule requiring a full-blown regulatory impact analysis.

I think we all know how long this listing would have taken had this administration determined that it was a major rule requiring a regulatory impact analysis.

I submit that by virtue of the intermingling of biological and economic considerations at the time of listing we have insured that the real listing priority, that governs under this act now, is that those species whose listing will have no or essentially no economic impact are most likely to get listed.

Yet, almost by definition, a species whose listing will impose no or virtually no cost upon the agencies of Government directly responsible for its conservation, or those agencies of Government or private institutions indirectly subject to requirements for its conservation by virtue of section 7, is a species for which the fact of listing will do little to advance its conservation.

I submit that a proper objective for this act with respect to listing is not that listing be made easily, and not that it be made difficult, but that it be made scientifically valid.

We have offered an amendment attached to our testimony which we believe will insure the scientific quality of listing. It will insure expeditious listing decisions and eliminate the intermingling of economic and biological considerations at the time of listing.

The principal features of our amendments are the following:

First, it will require the regular review of lists that have been developed by State natural resource agencies, their foreign counterparts and, most importantly, by professional scientific organizations, many of which now have developed their own lists of species that are endangered, threatened, rare or otherwise occupying similar categories.

Second, our amendment would require the submission of proposed listings to such professional scientific organizations so as to insure, or at least to make more likely, the effective input of those organizations.

Third, our amendment would require that listings be based solely upon the biological criteria now found in section 4(a)(1) of the act and on the basis of no other criteria.

We would retain the requirement for consideration of economic impact with respect to critical habitat designations, but we would eliminate the requirement that critical habitat designations occur concurrently with the listing of species.

Finally, we would require that final decisions with respect to the status of the species be made within a year after a proposal is published. Once we have eliminated the improper consideration of economics, I believe the 1-year time limit is a feasible and appropriate one.

As you know, my testimony is quite long. I will not summarize the other portions of it because I believe the portion I have summarized is the most critical for this panel. So, I will be happy to rest with that.

[The statement of Mr. Bean follows:]

PREPARED STATEMENT OF MICHAEL J. BEAN, ENVIRONMENTAL DEFENSE FUND

This testimony is presented on behalf of the organizations identified below¹ in support of the reauthorization of the Endangered Species Act. The principal focus of this testimony is on Section 4 of the Act, which governs the listing of species as threatened or endangered and the designation of their critical habitats. This testimony will demonstrate that, primarily as a result of amendments to Section 4 adopted in 1978, the listing process has ground virtually to a halt and must be legislatively revised if it is to function at a pace commensurate with the endangerment and loss of species. We propose amendments to accomplish that purpose and insure that listing decisions have a sound, scientific basis.

We also offer an amendment to encourage the introduction of experimental populations of listed species into areas from which they have previously been extirpated. We share the belief that such introductions may, in many cases, facilitate the conservation of such species and should, therefore, generally be encouraged.

¹ Environmental Defense Fund, World Wildlife Fund-U.S., National Audubon Society, Natural Resources Defense Council, Sierra Club, Wilderness Society, Friends of the Sea Otter, Center for Environmental Education, Fund for Animals, Defenders of Wildlife, Humane Society of the United States, Society for Animal Protective Legislation, International Primate Protection League, the Whale Center, Greenpeace, U.S.A., Friends of the Earth, Animal Protection Institute.

The remainder of this testimony responds to various proposals or allegations previously made to this subcommittee or its Senate counterpart. Many of those allegations are either wrong or grossly misleading; the proposals based upon them, particularly those which would weaken the duties of federal agencies under Section 7 or narrow the scope of animal and plant life eligible for protection under this Act, would have seriously adverse consequences for the future effectiveness of the statute.

I. THE LISTING PROCESS IS FUNDAMENTALLY FLAWED, HAS, SINCE 1978, BEEN INCAPABLE OF FUNCTIONING EFFECTIVELY, AND IS IN NEED OF SUBSTANTIAL REVISION

Since 1978, the process by which species are listed as threatened or endangered and their critical habitats designated has ground virtually to a halt. The failure of the listing process to function effectively can be attributed primarily to the fact that listing decisions are no longer based on strictly biological evaluations of the status of species. Rather, the listing process has itself become the crucible in which short-term, economic considerations are balanced against long-term, economic and other values. This balancing was meant to be carried out by the Section 7 exemption process which Congress crafted with such care in 1978. The current weighing of non-biological values before a species is even identified as endangered or threatened undermines the exemption procedures and debilitates the listing process. The solution is a thoroughgoing revision of Section 4 which reestablishes the listing process as one in which credible scientific evaluations of the status of species determine the outcome.

A. The actual record of listing decisions since the 1978 amendments has been dismal and has failed entirely under the current administration.

In November 1978, when Congress enacted major amendments to Section 4 of the Endangered Species Act, there were then outstanding more than 2,000 published, formal proposals to list species as threatened or endangered. Nearly all of these species occur in the United States. Today, nearly three and a half years later, fewer than five percent of these have been listed, and critical habitats have been designated for less than one percent. The remaining proposals were withdrawn because final listing could not be accomplished within the deadlines newly prescribed by Congress in 1978. During this Administration, not a single one of these species has been re-proposed for addition to either list. Nor has this Administration proposed for listing the plant species whose prior emergency listing expired last April. Indeed, the current Administration has yet to propose a single species for either list from any source.

At the time of the transition of administrations, rules adding three species of plants and a genus of invertebrates had been published in final form but had not yet become legally effective. Before they were to become effective in February 1981, Secretary Watt suspended them for economic review pursuant to Executive Order 12291. He renewed that suspension several additional times until July, when the Environmental Defense Fund served formal notice that his continued suspension of these listings was unlawful and that it would sue him unless he allowed listings to become effective. Within the 60 day waiting period required prior to commencing suit, Secretary Watt finally let the species listings of the previous Administration become effective.

In addition to those final, but not yet effective, listings at the time of transition, there were also some 29 formal proposed listings outstanding. Thus, far, the current Administration has listed only a single one of these, a crustacean, and that only last month. That species, the first and thus far only species for which this Administration can claim credit for listing (though the proposal originated with the prior Administration), is found here in Washington, D.C. Indeed, the only place it occurs is on property of the National Zoo. This Administration could safely list this species without impinging on any economic or industrial interest; only two entities, the National Park Service and the Smithsonian Institution, even commented on the listing proposal and neither opposed it.

It is significant that this crustacean species could be listed without the simultaneous designation of its critical habitat. Had this been required, additional procedures and economic analyses would have been necessary and would have encumbered its listing still further. Though Congress in 1978 substantially revised the procedures applicable to the listing of species and the designation of their critical habitats and sought to require those two procedures to go forward simultaneously, the record of accomplishment in that regard is exceedingly dismal. Indeed, since 1978, exactly one species that had not already been proposed for listing prior to the

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amendments that year has been listed and its critical habitat designated pursuant to non-emergency procedures.

The above statistics take on a pointed significance when evaluated in light of the number of biologically threatened or endangered species not now protected under this Act. The testimony of Dr. Raven and Dr. Eisner two weeks ago dramatically underscored the need for more expeditious listing action. Because of the failure of the listing process to function effectively, therefore, we face the virtual certainty of losing species we never knew to be endangered and failing to protect species we never knew needed protection.

B. The listing process has failed to function effectively since 1978 because its has become the forum for balancing short-term, economic considerations against long-term, economic and other values, rather than the section 7 exemption process.

The dismal record of accomplishment under Section 4 of the Act since 1978 reflects a fundamental flaw in the Act itself. It can fairly be charged that the current Administration has subverted this Act by effectively strangling the listing of new species. That charge was set in writing last December by none other than the head of the Office of Endangered Species of the Fish and Wildlife Service. His memorandum states that the actions of others in the Department of Interior blocking new listings raised "serious questions of legitimate policy decisions being precluded, circumvented, or subordinated by pseudo-legalistic ploys being used as excuses for delay." No doubt, for these hearings, the Department will seek to convey the image of harmony and noble intentions for future. Its inaction, however, speaks far more clearly than its words.

Fair as the charge of purposeful subversion may be against this Administration, the real problem lies elsewhere. The record since 1978 is clear that even when the federal Administration has tried to make the listing process work effectively and expeditiously, it was able to accomplish very little. The reason for its failure is that since 1978 the Act has mixed the roles of biology and economics in a way that is internally inconsistent and virtually unworkable.

In our view, Congress should recognize, and the Act should reflect, that there are two separate and quite distinct functions that must be performed. The first is to ascertain what species are in fact facing the threat of extinction. The second is to decide how much should be done to protect them and whether exceptions are warranted in particular cases. The former function should be based strictly upon an objective, scientific assessment of the biological status of the species in question. The latter, obviously, requires a balancing of short-term, economic interests against long-term, economic and other values. It is extremely important, however, that we keep these functions separate and not let our assessment of how much protection is desirable influence our determination of which species are in fact facing the threat of extinction.

Much of the delay and uncertainty that now accompanies the listing process arises from the fact that these two logically separate functions have been merged as a result of the 1978 amendments. Those amendments, though based in part on a GAO report which criticized the Fish and Wildlife Service for allowing economic—and therefore political—considerations to influence its listing decisions, actually make the listing process more vulnerable to such pressures.

Congress brought about this undesirable state as a result of two measures included in the 1978 amendments. The first required, insofar as prudent, that species not be listed unless their critical habitats were designated concurrently. By itself, that requirement would have had little adverse impact except for those cases—not all that uncommon—in which sufficient information is available to conclude that a species is endangered or threatened before information sufficient to identify its critical habitat is available. The second requirement, however, was that before any critical habitat could be designated, the Secretary was required to consider the economic impacts of such designation and authorized to exclude areas from the critical habitat if the benefits of exclusion outweighed the benefits of designation. Even when critical habitat is not designated at the time of listing, the discretion the Secretary exercises when making that determination is apparently regarded as triggering the duty to perform economic analyses under Executive Order 12291.

If Congress intended, by these two requirements, to compel a balancing of short-term, economic interests against long-term, economic and other values at the time a species is initially listed, then one has to wonder why Congress went to such pains to design an elaborate mechanism for making the same trade-offs when considering requests for exemptions from the requirements of Section 7. Except for the few species that themselves have commercial value, the only economic impacts attributable to the listing of a species come about as a result of Section 7. Since Section 7 has a carefully constructed mechanism, including both stringent substantive standards

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and detailed procedural requirements, for balancing economic and other values, the balancing of these same values at the time of listing negates the very purpose of the exemption mechanism. It must also be emphasized that the time of listing is the least appropriate time for attempting the difficult task of balancing. At that time, the trade-offs are speculative and remote, at best. The Section 7 exemption process, on the other hand, occurs at the most opportune time, when decisionmakers are faced with a real conflict in which at least some of the costs and benefits are quantifiable. Dr. Raven made this same point two weeks ago when he urged that trade-offs between species protection and other goals be made only as a last resort, as Section 7 now provides, when the choices are clearest.

In combination, these two requirements added in 1978 have all but destroyed the listing process. They have made it impossible for the previous Administration to list more than a handful of new species and made it possible for the current Administration to list essentially none. They have forced into actual practice a priority system for listing which gives highest priority to those species least likely to benefit from the fact of listing, because they are least likely to interfere with any economic interest. This Administration's sole listed species, the crustacean found solely on the property of the National Zoo, is testament to that.

C. Section 4 should be amended to reestablish the listing process as one in which credible scientific evaluations of the status of species determine the outcome.

Attached to this testimony is a proposed revision of Section 4. The purpose of that revision is to separate the two logically distinct functions of ascertaining the status of species and determining how much protection to give them. That separation, in turn, is intended to reestablish the listing process as one in which credible scientific evaluations of the status of species determine the outcome of the process. Other features of our proposed revision are designed to improve the quality of scientific input into listing decisions and to shorten the period in which listing decisions are to be accomplished.

Under our proposed revision of Section 4, the determination of whether a given species is threatened, endangered, or neither is to be a strictly biological determination, based solely upon the factors now specified in Section 4(a)(1). Our amendment would also require the Secretary to review regularly the status of species that have been identified by professional scientific organizations or by state or foreign conservation agencies as in danger of extinction or likely to become so, and to propose for listing those species for which there is substantial information that the species may be threatened or endangered. This new requirement is based upon the suggestion made here two weeks ago by Dr. Eisner. We also would require that notice of proposed listings be given to appropriate professional scientific organizations. In this way, we believe that the quality of scientific input into the listing process will be enhanced and that the scientific validity of the actual listing will be strengthened.

Under our proposed revision, the Secretary would be bound to make a final determination with respect to a listing within one year after proposing that listing. He could at that time, or at any subsequent time, designate critical habitat. Economic considerations could be taken into account, as they are now, in the designation of critical habitat. Such considerations may be an appropriate factor for critical habitat designations when the protection of any of several areas would offer similar benefits for the conservation of a species but entail substantially different economic consequences. They are inappropriate, however, when determining whether a particular species is threatened or endangered, a determination which can only be based on biological criteria.

Our amendment would also revise somewhat the procedures applicable to petitions for the listing of species. Under current law, if a petition presents substantial evidence warranting review of the status of a species, the Secretary must conduct that review. The statute imposes no time limit within which the review must be completed, however, nor does it require the Secretary to do anything upon completion of the review. Our amendment would require the Secretary to determine within a time certain whether a petition presented substantial evidence that a species should be added to or removed from either list. If the Secretary determines that the petition does present such evidence, then he must propose that listing action and, once proposed, treat it as he would any other proposal for listing. This amendment puts a greater burden of persuasion on petitioners, but it also makes the duties of the Secretary clearer and subject to express time constraints.

Together, the above amendments not only make the listing process more scientifically sound, but also more expeditious. A more expeditious listing process reduces the uncertainty that industry and government face when planning their future activities. A continuation of the prolonged uncertainty that now often characterizes

the listing process serves neither industry nor the interests of the species whose very survival is in question.

A final element of our revision of Section 4 is the simplification of certain requirements for public meetings or hearings. Under present law, in some situations, it is necessary to conduct multiple public meetings and hearings in various locales before a species may be listed. Our revision would require local newspaper notice of all proposed listings and would authorize a public hearing when desirable. The desire to increase local public participation that motivated some of the 1978 amendments to Section 4 was misplaced. If one keeps in mind the two logically distinct functions of listing species, a biological determination, and of determining how much protection to give them, a socio-economic determination, our point on this subject should be appreciated. At the listing stage, when the opportunity for public participation is bountiful, few members of the public can offer a significant contribution that addresses the biological criteria relevant to listing. At the Section 7 exemption stage, however, when the social and economic views of local citizens are most relevant, they have the least opportunity to express them. Our proposed revision of Section 4 would facilitate informed public participation in listing decisions while insuring their scientific integrity.

II. THE INTRODUCTION OF EXPERIMENTAL POPULATIONS OF LISTED SPECIES INTO AREAS FROM WHICH THEY HAVE BEEN EXTIRPATED SHOULD BE ENCOURAGED

There is general agreement, we believe, that the reestablishment of new populations of threatened or endangered species in areas from which they have been extirpated may often benefit the conservation of those species. Efforts to reestablish new breeding populations of whooping cranes and peregrine falcons are among the best known of such endeavors. Other examples include the reestablishment of endangered brown pelicans in Barataria Bay in Louisiana. Where such efforts at reintroduction of listed species are appropriate, the Endangered Species Act should not discourage them.

The International Association of Fish and Wildlife Agencies ("IAFWA") testified before this subcommittee that the Act may discourage such efforts at reintroduction by the states because the protections that apply to the introduced specimens may "prevent the legitimate and entirely safe harvest of both resident and migratory populations" of other species. In our view, that result need not occur. In fact, as it now reads, the Act offers several means of insuring the sort of flexibility that the states seek and avoiding the consequences they fear.

The most simple means of using the existing provisions of the Act to encourage the reintroduction of listed species is through the permit authority of Section 10. That provision allows the Secretary to issue permits for otherwise prohibited acts if the purpose of those acts is to enhance the propagation or survival of the affected species. Thus, for example, the Secretary could issue to the state of New Mexico a permit for all activities in association with an effort to reintroduce an endangered fish into some river there. The permit could expressly authorize the incidental taking of introduced fish by fishermen licensed by New Mexico to fish for other species. Similarly, in testimony before the Senate, the Western Regional Council testified that one of its member companies abandoned interest in establishing a new population of peregrine falcons on property on which it operated because of apprehension about the applicability of the Endangered Species Act. In fact, the concerns of that company could have been accommodated by the creative use of a Section 10 permit authorizing the occasional taking of the introduced birds incidental to the company's operation.

Still another way to accommodate the concerns about introduced populations is through the authority to list such populations separately as threatened species and to tailor the regulations applicable to them to meet their conservation needs. We would encourage the subcommittee to explore carefully both of these possible administrative solutions before recommending legislation to address this matter. If you determine that legislation is necessary, we have relatively few, but nonetheless important, concerns with the amendment proposed by the IAFWA.

First, we believe that not all experimental populations of endangered species should automatically be treated as threatened species. Rather, any such population should remain listed as endangered unless determined by the Secretary to be not essential for the survival of the species. Secondly, concurrence of the state for the attempted establishment of an experimental population should be required only for populations to be introduced on non-federal lands and only with respect to states that have entered into cooperative agreements with the Secretary under Section 6(c). Not all states have entered into such cooperative agreements. Thirdly, the re-

quirements of the Act should remain in place for experimental populations occurring on National Park, National Wildlife Refuge, of National Wilderness Preservation System lands. Finally, if the matter is to be addressed legislatively, it should be applicable to plants as well as fish or wildlife. Language reflecting our differences with the proposal of the IAFWA is attached as a proposed amendment. We emphasize, however, that the subcommittee should seriously explore the availability of administrative mechanisms to address this matter before recommending any legislative changes.

III. PROPOSED AMENDMENTS THAT WOULD ELIMINATE PROTECTION FOR CERTAIN PLANTS AND INVERTEBRATES, SUBSPECIES, AND POPULATIONS SHOULD BE REJECTED BECAUSE THEY WOULD SERIOUSLY IMPAIR THE EFFECTIVENESS OF THE ENDANGERED SPECIES ACT

The American Mining Congress has proposed amendments which would sharply curtail the reach of the Endangered Species Act by eliminating any possibility of protection for nearly all types of invertebrates and for numerous "lower" forms of plant life. No scientifically based rationale for that proposal has been advanced, and none can be. As Dr. Eisner stated in his testimony two weeks ago, the diversity of all life, including plants and invertebrates, represents an endowment to ourselves and to succeeding generations. From that endowment, we can expect to derive major benefits for human welfare in the fields of medicine, agriculture, industry, and science. Dr. Eisner's small bottle containing the tiny moss animal, and inconspicuous creature hardly recognizable as a living form, illustrated that point well. From a creature such as that, scientists have just isolated a chemical that is extremely potent against cancerous tumors.

As both Drs. Eisner and Raven made clear in their testimonies, the opportunities for discoveries of enormous practical value are as likely to be secured through the preservation of the less familiar life forms as through the preservation of the better known. Indeed, not even aesthetic considerations justify the sorts of distinctions that the American Mining Congress would make, as those familiar with the beauty of seashells, butterflies, and corals will know.

Both the American Mining Congress and the National Forest Products Association have also proposed that the protection of the Endangered Species Act no longer be available to subspecies or geographic populations of any species unless that species qualifies for protection everywhere. The effect of this proposal would be to eliminate the protection now afforded under this Act to United States populations of the bald eagle, the California sea otter, the gray wolf, the Everglades kite, the Florida panther, the California least tern, and the grizzly bear, among others. Although a few of these animals enjoy protection under other federal laws, all would be put at greater risk as a result of terminating the protection of the Endangered Species Act.

The authority to protect individual populations and to tailor the amount of protection to fit the needs of those populations adds flexibility to the Act and probably results in less regulation than would otherwise occur. For example, the authority to treat separate populations of a given species differently allows the American alligator to be totally protected in some states and commercially exploited in others. Similarly, the bald eagle is endangered in some states, threatened in others, and neither in Alaska. The authority the Act gives to recognize the different conservation needs of different animal populations and to tailor regulations accordingly allows us to avoid making all or nothing choices between total protection everywhere and no protection anywhere. Any amendment that limits that flexibility is counter not only to the interests of the species affected but to industry as well.

IV. THE PROPOSED AMENDMENT TO REQUIRE A RESERVATION BY THE UNITED STATES WITH RESPECT TO CERTAIN LISTINGS UNDER CITES IS UNSOUND AND SHOULD BE REJECTED

The International Association of Fish and Wildlife Agencies ("IAFWA") has proposed to amend Section 8 of the Endangered Species Act so as to require that the United States take a reservation with respect to the listing of species on Appendices I or II of the Convention on International Trade in Endangered Species ("CITES") under certain circumstances. Specifically, the amendment would require the United States to oppose the listing of any species on either Appendix if the biological and trade status of that portion of the species resident in the United States did not require such listing. If unsuccessful in its opposition to such listing, the United States would be required to enter a reservation with respect to the listing of that species.

There are several reasons why the proposed amendment is unsound and should be rejected. Most fundamentally, it attempts to bind the United States to a rigid formula in an international forum. As a matter of practical diplomacy that is unsound

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because it denies the possibility that the United States might learn something at an international forum about the status of its own species that it did not previously know (e.g., that imports of that species by foreign nations greatly exceed reported exports from the United States), and more fundamentally because it impairs the ability of the United States to participate effectively in the give and take of that forum. Rigid adherence to an inflexible formula could mean, for example, that the United States would be unable to make a concession on a particular species in which its interest was rather minor in return for gaining support for its position on another species in which its interest was much greater.

Apart from considerations of practical diplomacy, there are reasons of policy to reject the proffered amendment. The United States, through the Pelly Amendment to the Fishermen's Protective Act, has actively sought to discourage other nations from using reservations or objections as a means of frustrating the collective decisions of the International Whaling Commission and the parties to CITES. The effectiveness of the Pelly Amendment as a deterrent to such unilateral actions by other nations could be seriously eroded were the United States to take reservations against CITES decisions. That erosion would not be blunted by the fact that our reservations would be based on our assessment of scientific data; the Japanese have traditionally offered the same justification when they have refused to abide by the quotas of the International Whaling Commission.

The above arguments are not to suggest that the United States should never enter a reservation with respect to a CITES listing or that our assessment of the scientific bases of that listing should not be an important factor in making that determination. Rather, our contention is that it is unrealistic and potentially counterproductive to prescribe a rigid formula which mandates reservations in situations we cannot now foresee.

V. PROPOSED AMENDMENT THAT WOULD LESSEN THE DUTIES OF FEDERAL AGENCIES UNDER SECTION 7 OF THE ENDANGERED SPECIES ACT STRIKE AT THE HEART OF THE ACT'S MOST EFFECTIVE PROVISION

Section 7 of the Endangered Species Act, which imposes upon all federal agencies a duty to insure that their actions not jeopardize the continued existence of any listed species or adversely affect its critical habitat, is, without question, the most important provision of the Act. It provides the means whereby the federal government insures that its actions are compatible with the continued survival of endangered species.

In 1978, Section 7 was the principal focus of congressional attention. Believing that the requirements of Section 7 were too inflexible, Congress in that year provided a mechanism whereby activities otherwise subject to Section 7 could be exempted from it. There was considerable uncertainty then as to how frequently a need to resort to the exemption process would arise. Three years later, we see that the exemption process worked smoothly for the two projects that gave rise to congressional concern in 1978 and that no other projects have gone through the process.

In 1978, Congress did not expect or intend that resort to the exemption process would be frequent. Rather, Congress intended that, through the consultation process and by any other means, the apparent conflicts between endangered species and federal activities were to be resolved whenever feasible. That the exemption process has been used so infrequently is strong evidence that Congress' purpose has been realized.

Despite that, several industry groups, among them the American Mining Congress and the National Forest Products Association, have proposed a major rewriting of the entirety of Section 7, sweeping away the exemption process altogether and substituting for the mandatory duties of Section 7 a hollow exhortation to federal agencies to do their best.

Exhortatory standards are not new to endangered species legislation. The first federal Endangered Species Act in 1966 directed major federal landholding agencies to preserve the habitats of endangered species "insofar as practicable and consistent with the primary purposes" of those agencies. That admonition was ineffective fifteen years ago and it would be ineffective today. Rather than turn the clock back a decade and a half, we should, as Russell Train urged two weeks ago, insure that we keep this most effective part of the Endangered Species Act intact at least through the remainder of this century. The experience of the past nine years shows we can accommodate our national needs with the preservation of endangered species. When the rare case arises pitting those two goals squarely against each other, the exemp-

tion process created in 1978 provides the means of making an informed choice. You should abandon neither that process nor the fundamental duties of Section 7 itself.

ATTACHMENT 1: PROPOSED AMENDMENT TO SECTION 4.—DETERMINATION OF
ENDANGERED SPECIES AND THREATENED SPECIES

Sec. 4(a) *General*.—(1) The Secretary shall by regulation promulgated in accordance with subsection (b) of this section determine whether any species is an endangered species or a threatened species because of any of the following factors:

(A) the present or threatened destruction, modification, or curtailment of its habitat or range;

(B) overutilization for commercial, sporting, scientific, educational or other purposes;

(C) disease or predation;

(D) the inadequacy of existing regulatory mechanisms; or

(E) other natural or manmade factors affecting its continued existence.

(2) With respect to any species over which program responsibilities have been vested in the Secretary of Commerce pursuant to Reorganization Plan Numbered 4 of 1970—

(A) in any case in which the Secretary of Commerce determines that such species should—

(i) be listed as an endangered species or a threatened species, or

(ii) be changed in status from a threatened species to an endangered species, or

(iii) be subject to more restrictive regulations, in the case of threatened species, he shall so inform the Secretary of the Interior, who shall implement such action;

(B) in any case in which the Secretary of Commerce determines that such species should—

(i) be removed from any list published pursuant to subsection (c) of this section;

(ii) be changed in status from an endangered species to a threatened species; or

(iii) be subject to less restrictive regulations, in the case of threatened species,

he shall recommend such action to the Secretary of the Interior, and the Secretary of the Interior, if he concurs in the recommendation, shall implement such action; and

(C) the Secretary of the Interior may not list or remove from any list any such species, change the status of any such species which are listed, or make less restrictive the regulations applicable to any such species listed as threatened species, without a prior favorable determination made pursuant to this section by the Secretary of Commerce.

(b) *Basis for determinations*.—(1) The Secretary shall make determinations required by subsection (a) of this section on the basis of the best scientific and commercial data available to him, taking into account those efforts, if any, being made by any state or foreign nation, or any political subdivision thereof, to protect such species, within any area under its jurisdiction, or on the high seas.

(2) The Secretary shall regularly review the status of all species which have been identified as in danger of extinction or likely to become so within the foreseeable future by any professional scientific organization, or subdivision thereof, or by any agency of a state or of a foreign nation responsible for the conservation of fish or wildlife or plants and shall propose for listing, pursuant to paragraph (5) of this subsection, any such species, or any other species, for which he determines there is substantial information that such species may be endangered or threatened.

(3) The Secretary shall, within 120 days of the receipt of a petition of an interested person under subsection 553(e) of title 5, United States Code, to add any species to or remove any species from either of the lists published pursuant to subsection (c) of this section, determine whether such petition presents substantial scientific information that such addition or removal may be warranted. If the Secretary determines that the petition presents such substantial scientific information, he shall promptly propose such addition or removal pursuant to paragraph (5) of this subsection.

(4) Except as provided in paragraphs (5) and (6) of this subsection, the provisions of section 553 of title 5, United States Code (relating to rulemaking procedures), shall apply to any regulations promulgated to carry out the purposes of this Act.

(5) In the case of any regulation proposed by the Secretary to carry out the purposes of this section with respect to the determination of the status and the listing of endangered or threatened species, the Secretary

(A) shall not less than 90 days before the effective date of the regulation—

(i) publish a general notice and the complete text of the proposed regulation in the Federal Register, and

(ii) give actual notice of the proposed regulation (including the complete text of the regulation) to the state agency responsible for the conservation of fish or wildlife or plants in each state in which the species is believed to occur, and invite the comment of such agency thereon;

(B) shall, insofar as practical, in cooperation with the Secretary of State, give notice of the regulation to each foreign nation in which the species is believed to occur or whose citizens harvest the species on the high seas, and invite the comment of such nation thereon;

(C) shall give notice of the regulation to such professional scientific organizations as he deems appropriate;

(D) shall publish a summary of the regulation in newspapers of general circulation in the areas in which the species is believed to occur;

(E) shall offer for publication in appropriate scientific journals the substance of the Federal Register notice referred to in subclause (i) of clause (A) of this paragraph;

(F) may, if requested to do so within 45 days after the date of publication of general notice, hold a public hearing thereon; and

(G) shall, within one year after the date of publication of general notice, publish a final determination with respect to such listing, with such determination based solely upon the factors set forth in paragraph (1) of subsection (a) of this section.

(6) The Secretary may, at the time of listing or subsequent thereto, designate the critical habitat of any endangered or threatened species and promulgate appropriate protective regulations for threatened species as provided in subsection (d) of this section. The procedures that govern the designation of critical habitats and the promulgation of appropriate protective regulations for threatened species shall be the same as those that pertain to the listing of species under paragraph (5) of this subsection, except that in determining the critical habitat of any endangered or threatened species, the Secretary shall consider the economic impact, and any other relevant impacts, of specifying any particular area as critical habitat, and he may exclude any such area from the critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying the area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

(7) Neither paragraph (4) or (5) of this subsection nor section 553 of title 5, United States Code, shall apply to any regulation (including any regulation implementing section 6(g)(2)(B)(ii) of this Act) issued by the Secretary in regard to any emergency posing a significant risk to the well-being of any species of fish or wildlife, or plants, but only if (I) at the time of publication of the regulation in the Federal Register the Secretary publishes therein detailed reasons why such regulation is necessary, and (II) in the case such regulation applies to resident species of fish, wildlife, and plants, the Secretary gives actual notice of such regulation to the agency responsible for conservation of fish or wildlife or plants in each state in which such species is believed to occur. Any regulation promulgated under the authority of this paragraph shall cease to have force and effect at the close of the 240-day period following the date of publication unless, during such 240-day period, the rulemaking procedures which would apply to such regulation without regard to this subparagraph are complied with. If at any time after issuing an emergency regulation the Secretary determines, on the basis of the best scientific and commercial data available to him, that substantial evidence does not exist to warrant such regulation, he shall withdraw it.

(8) The publication in the Federal Register of any proposed or final regulation which is necessary or appropriate to carry out the purposes of this Act shall include a summary by the Secretary of the data on which such regulation is based and shall show the relationship of such data to such regulations.

(9) Any proposed or final regulation which specifies any critical habitat of any endangered species or threatened species shall be based on the best scientific data available, and the publication in the Federal Register of any such regulation shall, to the maximum extent practicable, be accompanied by a brief description and evaluation of those activities (whether public or private) which, in the opinion of the Secretary, if undertaken may adversely modify such habitat, or may be impacted by such designation.

(c) Lists.—(1) The Secretary of the Interior shall publish in the Federal Register, and from time to time he may by regulation revise, a list of all species determined by him or the Secretary of Commerce to be endangered species and a list of all spe-

cies determined by him or the Secretary of Commerce to be threatened species. Each list shall refer to the species contained therein by scientific and common name or names, if any, and shall specify with respect to each such species over what portion of its range it is endangered or threatened and specify any critical habitat within such range.

(2) Any list in effect on the day before the date of the enactment of the Endangered Species Act Amendments of 1982 of species of fish or wildlife, or plants determined by the Secretary to be threatened or endangered shall remain in effect unless and until changed in accordance with paragraph (5) of subsection (b) of this section.

(3) The Secretary shall—

(A) conduct, at least once every five years, a review of all species included in a list which is published pursuant to paragraph (1) and which is in effect at the time of such review; and

(B) determine on the basis of such review whether any such species should—

(i) be removed from such list;

(ii) be changed in status from an endangered species to a threatened species; or

(iii) be changed in status from a threatened species to an endangered species.

Each determination under subparagraph (B) shall be made in accordance with the provisions of subsection (a) and (b).

(d) *Protective regulations.*—Whenever any species is listed as a threatened species pursuant to subsection (c) of this section, the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species. The Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 9(a)(1), in the case of fish and wildlife, or section 9(a)(2), in the case of plants, with respect to endangered species; except that with respect to the taking of resident species of fish or wildlife, such regulations shall apply in any State which has entered into a cooperative agreement pursuant to section 6(a) of this Act only to the extent that such regulations have also been adopted by such State.

(e) *Similarity of appearance cases.*—The Secretary may, by regulation, and to the extent he deems advisable, treat any species as an endangered species or threatened species even though it is not listed pursuant to section 4 of this Act if he finds that—

(A) such species so closely resembles in appearance, at the point in question, a species which has been listed pursuant to such section that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species;

(B) the effect of this substantial difficulty is an additional threat to an endangered or threatened species; and

(C) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of this Act.

(f) *Recovery plans.*—The Secretary shall develop and implement plans (hereinafter in this subsection referred to as "recovery plans") for the conservation and survival of endangered species and threatened species listed pursuant to this section, unless he finds that such a plan will not promote the conservation of the species. The Secretary, in developing and implementing recovery plans, may procure the services of appropriate public and private agencies and institutions, and other qualified persons. Recovery teams appointed pursuant to this subsection shall not be subject to the Federal Advisory Committee Act.

(g) *Agency guidelines.*—The Secretary shall establish, and publish in the Federal Register, agency guidelines to insure that the purposes of this section are achieved efficiently and effectively. Such guidelines shall include, but are not limited to—

(1) procedures, for recording the receipt and the disposition of petitions submitted under subsection (b)(3) of this section;

(2) Criteria for making the findings required under such subsection with respect to petitions;

(3) a ranking system to assist in the identification of species that should receive priority review for listing; and

(4) a system for developing and implementing, on a priority basis, recovery plans under subsection (f) of this section.

The Secretary shall provide to the public notice of, and opportunity to submit written comments on, any guidelines (including any amendment thereto) proposed to be established under this subsection.

ATTACHMENT 2: PROPOSED ENDANGERED SPECIES ACT AMENDMENT ON EXPERIMENTAL
POPULATIONS

The Act would be amended as follows:

1. Subsections 3(7) through 3(21) are renumbered 3(8) through 3(22) and a new subsection 3(7) is added to read as follows:

The term "experimental population" means any population (including eggs, propagules or individuals) of an endangered or threatened species, including offspring arising solely from such population, that (A) any person authorized by the Act has transported and released outside of the current range of the species to further its conservation pursuant to the Act and (B) except as provided in the next sentence, is wholly separate geographically from populations of the species that do not meet the criteria set forth in provision (A) of this subsection. A population that would qualify as an experimental population but for the the requirement of (B) above may be treated as an experimental population in those areas where, or at those times when, it is wholly separate geographically from populations that do not meet the criteria set forth in provision (A) of this subsection.

2. Subsections 4(f) through 4(h) are numbered 4(g) through 4(i) and a new subsection 4(f) is added to read as follows:

Experimental populations.—(1) No new experimental population shall be established in any State before a recovery plan has been developed pursuant to subsection (h) of this section and, for any State that has entered into a cooperative agreement with the Secretary pursuant to section 6(c) of the Act, without concurrence of the State agency for establishment of resident species on areas not under Federal jurisdiction.

(2) The Secretary shall evaluate each new experimental population before its establishment and shall at least once every five years evaluate all existing experimental populations to determine whether such populations are essential to the survival of an endangered or threatened species.

(3) If the Secretary determines, pursuant to paragraph (2) of this subsection and to the procedures set forth in subsection (b)(1) of this section, that any existing or new experimental population is not essential to the survival of an endangered or threatened species, then such population shall be listed as a threatened species concurrently with such determination and without additional procedural steps. Such existing and, once established, new experimental populations shall be subject to the provisions of this Act concerning threatened species except as provided in paragraph (4) of this subsection.

(4) For any experimental population determined to be not essential to the survival of an endangered or threatened species:

(a) no critical habitat shall be designated: and

(b) such experimental populations shall be subject to subsection 7(a)(1) of the Act, and shall be subject to conferrals and biological assessments pursuant to subsections 7(a)(3) and 7(c) as though they were species proposed to be listed as endangered or threatened, but shall otherwise be exempted from the requirements of section 7 of the Act.

(5) Paragraphs (2), (3) and (4) of this subsection shall not apply to any experimental population or portion thereof occurring on a National Park, National Wildlife Refuge or area within the National Wilderness Preservation System.

Mr. BREAU. We will hear testimony from Dr. Jack Early.
Dr. Early.

STATEMENT OF JACK EARLY

Dr. EARLY. Thank you, Mr. Chairman.

I am Jack Early, president of the National Agricultural Chemicals Association. I have with me this morning Dr. Don Spencer. He is an ecologist on our staff who is here to assist in responding to questions if I get into an area that I can't handle. So, he is the expert, and I will rely on him this morning.

Mr. Chairman, the National Agricultural Chemicals Association is a nonprofit trade association of manufacturers and formulators of pest control products employed in agricultural products.

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We have submitted to the committee, Mr. Chairman, a prepared written statement that we would like to make part of the record, with your permission, sir.

Mr. BREAUX. Without objection, your entire statement will be made part of our record. That goes for everyone's testimony.

Dr. EARLY. Within this written statement you received we have made seven recommendations that we believe the act needs some improvement and modification on.

The process for reauthorizing funding for the species act affords the Congress and a wide variety of interested parties the opportunity to examine the act's impact to date as well as its prospective mission. We appreciate this opportunity to comment during this period of examination.

Mr. Chairman, NACA believes it is imperative to explore the intermediate and the long-term potential of abuse inherent in the statute. We are specifically concerned about the act's listing processes and various satellite lists which can influence agricultural production programs.

To date, the act's provisions have not been fully implemented. Consequently, the potential for disruptions in agriculture's economic base has not been obvious to date. We submit that the enormity of the task in determining the possible endangered or threatened status of all living species of animals and plants wholly escaped the architects of the legislation under review.

Specifically, since 1973 only very small numbers of species have been studied in sufficient depth so as to be placed on the official protected list. Further, only a fraction of these species are involved in recovery programs.

Since the act mandates that all Federal agencies participate in the protection of endangered and threatened species in every program they authorize, it is staggering to contemplate the full implementation of this act. Further, the act has adhered to 38 States, having, or in the process of preparing, their own State lists. These lists commonly encompass species not nationally endangered, but rather rare or peripheral to a particular State.

NACA strongly suggests that the act's full adherence, through the multiplicity of lists, both Federal and State, is counterproductive and an invitation to wholesale disruption of agriculture production.

To this point, NACA recommends that the array of species peripheral to the act should not be binding on any Federal agency or petition for a permit, license, or easement until the species has met and been granted an endangered species status.

NACA's member companies and their domestic customers, the American farmer, face a future of futility if Congress does not insure reasonable flexibility in the act's direction and enforcement.

We are all aware of the language of the U.S. Supreme Court decision where the court insisted that the cost would be no consideration in reversing the trend toward species extinction. Notwithstanding, for how long and by what standard of reason must we ignore the cost as a consideration?

Our membership faces a significant dilemma. We support the programmatic management of wildlife and native plant populations so as to avoid unnecessary loss of species. However, we must

be pragmatic if only to recognize that changes in technology for crop production are critical to our Nation's domestic food supply and foreign exports.

It seems unavoidable to judiciously utilize necessary land and water systems upon which human populations depend without impacting certain living organisms which also depend upon these same systems.

We now have the opportunity to look forward to, as it were, consideration of countless insects and plants that can be added to the multiplicity of lists for protection.

As invertebrate and floral candidates increase, it must follow that pest control efficiency will decrease. If this is not the case, we have no disagreement with the act. It is often necessary to have multi-State pest management programs to insure agriculture productivity, such as the gypsy moth programs in the Northeast and all the way over to the West in recent dates.

For such programs, the time for quantification of the problem to the last effective application dates is often a matter of just a few weeks. Yet, it is increasingly likely that before a grower receives approval for insect control or vegetative cover manipulation, the infested area will have to be thoroughly searched for listed plants and invertebrates that might be present.

The issue is simply whether consumers and proponents for complete implementation of the act comprehend the consequences of this delay. Members of the subcommittee, the consequences are massive losses to crop yield if they go on very long.

In an Environmental Protection Agency in-house evaluation of what might be required of pesticide labeling to discharge their legislative responsibility to protect endangered species, different versions were studied to direct the user to inquire if any endangered species are known to be present in their treatment area. No final decision has been made as of now, but it is worthwhile to examine the impact of what this would have on agricultural productivity.

First, if fully implemented for many pesticides, State and Federal wildlife offices would have to be prepared to handle hundreds of thousands of inquiries from individual farmers, livestockmen, foresters and others who must apply them.

Second, as previously noted, crop damage is often imminent. Thus, proper timing of application means the difference between success and failure.

Third, more often than not precise information cannot be given. The species may be officially listed as endangered because only a few localized and small populations are known.

But it is also true that careful surveys throughout the range, suitable to support the species, have not been performed. Therefore, in common practice the inquirer is directed to have a survey made of his particular area to determine if endangered species are present and, if found to be present, to delay his project until a consultation resolves the problem. Such surveys often require professional assistance that is costly and time consuming.

In conclusion, Mr. Chairman, from the outset of life on this planet interspecies competition for finite resources has been the crux of evolution. In an historic perspective, man has gradually acquired competitive dominance by virtue of developing the technol-

ogy to keep millions of species capable of displacing him at arm's length.

How much of this intrinsic advantage can we truly afford to give back and still remain a viable population? Yet, each suggestion that we review concerning the efforts necessary to support endangered species is equated with the theory that we are playing God.

It must be recognized that proponents of animal rights also invoke a theology that fails to consider a modicum of Darwinian necessity. To assure a serious effort to retain those species that contribute to our welfare or that man enjoys for purely esthetic reasons is meritorious. Notwithstanding, to make our economy and particularly agricultural productivity hostage to species of interest only to a few taxonomists, is pointless. To do so for species whose only manifest importance is that they exist is absurd.

We appreciate this opportunity to acquaint the committee with some of our views concerning the Endangered Species Act and its impact on agriculture. This concludes our oral statement this morning.

[The statement of Dr. Early follows:]

PREPARED STATEMENT OF DR. JACK D. EARLY, PRESIDENT, NATIONAL AGRICULTURAL
CHEMICALS ASSOCIATION

The National Agricultural Chemicals Association (NACA) is a nonprofit, trade organization of manufacturers and formulators of pest control products employed in agricultural production. NACA's membership is composed of the companies which produce and sell virtually all of the technical crop protection materials and a large percentage of the formulated products registered for use in the United States.

The process of reauthorizing funding for the Endangered Species Act affords the Congress and a wide variety of interested parties an opportunity to examine the Act's impact to date as well as its prospective mission; we appreciate the opportunity to comment during this period of examination. At this time, NACA would like to comment on certain areas within the law which, if fully enforced, could threaten American agriculture's ability to feed the people of this country and millions of others in the world.

NACA's recommendations fall into two broad areas: (1) to restructure procedures so as to minimize costly and time-consuming implementation of the Act's provisions that could threaten agricultural production and (2) to re-assert the element of reason into the allocation of critical resources, land and water, that must serve both endangered species and agriculture's vital role in food and fiber production.

We will present our concerns and recommendations in the following seven areas: 1. Need for better data; 2. redefinition of critical habitat; 3. economic loss from delays; 4. compensation provisions; 5. satellite lists; 6. biological assessment; and 7. ESA amendments.

NEED FOR BETTER DATA

We believe that the Endangered Species Act should be administered on the basis of the best scientific and commercial data available. Unfortunately, many species have been listed, and proposed for listing, where the scientific data have been inadequate even though they might be the "best" available. An example of such inadequacy is the recent Federal Register listing by the U.S. Department of Interior of 3,000 species of native plants that are candidates for endangered or threatened status under the Act. Although this list has no official status the U.S. Forest Service and the Bureau of Land Management have accepted most of these plants as "sensitive" species. It must be noted that on federal lands administered by these two agencies, sensitive species are afforded essentially the same protection as officially listed endangered species. The data inherent in this recent listing are inadequate for the following reasons:

1. Although the species have been properly identified, their occurrence throughout their potential range is subject to extensive field investigation; and such have yet to be undertaken.

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2. These species' flowering periods and their natural means of pollination (self, wind, and insect) are not well-known. Consequently, a range improvement program is made inordinately difficult until such time as this information is available.

Recommendation.—We would urge Congress to stress the need for listings to be truly based upon adequate current field surveys which determine population level, present distribution and biological data that will permit avoidance of adverse effects.

REDEFINE "CRITICAL HABITAT"

Of prime importance is the need to redefine "critical habitat" and the circumstances under which endangered species can be re-introduced into an area. For example, fisheries management over the years have acquired an astonishing capability to rebuild declining populations of game fish, support sustained yield under annual fishing pressure, and stock new water bodies from hatchery-reared programs. This technology is now being put to use in endangered fish recovery programs with considerable success. But reintroduced endangered fish have "habitat priority" and may strictly limit uses of water, including that of agricultural irrigation.

Similarly, the recent breakthrough in captive breeding of raptors, (eagles falcons) and the highly effective foster-rearing of these birds in the wild, have resulted in supplying annually for reintroduction into the wild almost as many fledged young Peregrine falcons as pre-disturbed wild populations are estimated to have produced. Precisely where each pair will establish a breeding territory is not a completely controllable factor.

It is important to note that the spread of endangered species into areas not occupied at the time of listing cannot be confined to Federal and State owned lands, nor to water habitats not already committed in support of the economy. In fact, endangered wildlife can be attracted to many modifications man has made in the environment, such as manatees to warm water discharges of electric power plants, or bald eagles to open water tailrace of dams. There, unless ESA recovery programs employ methods other than site-priority, costly economic impacts can be expected.

Recommendation.—In regard to endangered wildlife and plants established in areas long vacant of the species, methods other than habitat priority should be employed. An approved, published Management/Recovery Programs which includes costs/benefit analysis, should help considerably to resolve present inequities.

ECONOMIC LOSS FROM DELAYS

A number of legal actions have been brought under the Act, to address regulations and definitions. In addition, the Act allows that "any person may commence a civil suit against any person or the United States who is allegedly in violation of any provision of the Act." The law clearly provides that the court may award costs of litigation, including reasonable attorney and expert witness fees, to any plaintiff whenever the court determines such an award is appropriate. In many cases these private actions are brought on an irresponsible basis and the defendant suffers heavy losses while the action is being litigated. For example, Basin Electric had invested some \$444 million in the Grey Rocks Power Plant in Wyoming before a court suit based upon an endangered species located approximately two hundred and seventy miles downstream temporarily stopped construction. The interest on the construction loan amounted to \$140,000 per day, or fifty million dollars per year. Faced with threatened delayed tactics, the company established a \$7.5 million trust fund to be used for purchasing endangered species habitat and their management. The lawsuit was settled because the company was faced with tremendous liabilities, and nothing was settled on the merits.

Recommendation.—NACA suggests that the moving party should be required to post a bond sufficient to cover the cost of the delay in project construction if the plaintiff should not prevail or fail to make his case.

COMPENSATION PROVISION

Another concern with the Act is the lack of any provision for loss of property or compensation for income lost whenever protection of an endangered species has led to destruction of a person's property or livelihood. For example, when the endangered Gray Wolf ranged outside the U.S. Forest Service wilderness area in Minnesota and preyed upon a dairy farmer's livestock, that owner was restricted by the ESA from defending his property other than calling for the state game warden to come and live-trap and remove offending individual wolves—a time-consuming solution,

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costly to both the impacted landowner and the state. No compensation for livestock losses was provided.

Recommendation.—Make provision to compensate injured parties for damages resulting from administration of the ESA.

SATELLITE LISTS

The 1978 ESA amendments added a new category for protection, "proposed for listing" which added species in numbers far exceeding those on the official endangered and threatened list. Also, the ESA has "cloned" to 38 states that have, or are in the process of preparing, their own "State Lists" that commonly include species that are not endangered nationally but are rare or peripheral to that particular State. Further, the Department of Interior and other Federal agencies have funded projects enabling Native Plant Societies at the State level to prepare "endangered" plant lists based primarily on herbarium records. For example, such a cooperative study "Rare and Endangered Vascular Plant Species in West Virginia" (Apr. 1981) turned up 360 plant species divided into the following categories: (1) vulnerable, (2) rare, (3) local, (4) single West Virginia station, (5) restricted range, and (6) peripheral.

Our two largest Federal land management agencies, the Bureau of Land Management and the U.S. Forest Service, under their own authority are establishing a "sensitive species" list on a state by state basis. This list may include proposed species, candidate species, experimental species, plus species from State and Society lists that their staffs judge should be protected to prevent their reaching a status where they would be endangered or threatened.

This complex of lists involving thousands of species not directly covered by the Endangered Species Act is nevertheless, a very troublesome problem for agriculture. In practice such species cannot be ignored in planning any food or fiber production. These sensitive species stand in the wings ready to go on stage at the call of any private party wishing to delay or cancel a project or agricultural crop for which they have objection of any nature.

Recommendation.—We feel that the array of species peripheral to the Act should not be binding on any Federal Agency, or a petitioner for a permit, license or easement, until they have met and been awarded endangerment status.

BIOLOGICAL ASSESSMENT

One of the potential problems that faces the agricultural chemicals industry in Section 7(c) concerns biological assessment, which is intended to be completed within one hundred and eighty days. However, when consultation is necessary, an additional ninety days can be granted for review. Consequently, nine months can elapse before a judgment can be made.

Such delays could cause irreversible harm to agriculture. Crop plant diseases such as southern corn blight often strike with but a few days warning and spread rapidly if controls cannot be applied immediately. Grasshopper control programs on western range lands have normally but three (3) weeks from the time when late spring survival of disastrous numbers of immature grasshoppers is ascertained and the time spray-planes must be airborne. There would be no time to make a biological assessment for endangered species, if the crop is to be saved.

Recommendation.—The delays occasioned by the necessity to perform a biological assessment before pest control programs can be mounted must not be imposed on agriculture or public health programs. Specific exemptions should be incorporated in Section 6 of the Act to accommodate any time-critical agricultural or public health operations.

1979 AMENDMENTS

In 1979, the Act was amended to establish an Endangered Species Act Committee to provide exemptions from the "mandates" of the Act, as interpreted by the U.S. Supreme Court in the Tellico Dam case. Although this was a step in the right direction, several questions arose with that 1979 amendment.

First, there is a question whether or not the present membership of the Committee should have the authority to designate members within their respective agencies to serve, realizing the enormity of their respective Presidential Cabinet responsibilities.

Second, there is a question whether the time for the Committee to review applications for exemptions is excessive.

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Third, it is questionable whether the 1979 amendment changed the language in Section 7 of the ESA to completely modify the U.S. Supreme Court interpretation that the Act has priority over the primary missions of Federal agencies, "whatever the cost." In that amendment, the phrase: "do not jeopardize the continued existence of . . . endangered and threatened species or result in the destruction or adverse modification of habitat of such species . . ." was changed to read: "not likely to jeopardize . . .".

Recommendation.—Section 7(a)(2) should be modified further to permit more flexibility and discretion by stating that:

"Each Federal Agency shall, in consultation with and with the assistance of the Secretary, *in so far as practical and consistent with their primary objective*, insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize . . ." (Added language emphasized.)

CONCLUSION

Dr. Norman E. Borlaug, who received the Nobel Prize for Peace for his outstanding contribution to alleviation of world hunger through the development of improved wheat varieties warns that food production must double by the year 2030 to feed a world population of eight billion. "We can't feed the world with old technology. And we can't feed it without insecticides, fungicides, herbicides, and good machinery," says Borlaug.

The National Agricultural Chemicals Association feels that there is a genuine cause to balance the need to protect endangered species with the need to increase food production lest humans become an endangered species.

We applaud the Subcommittee for undertaking a review of the Act and its workability. The National Agricultural Chemicals Association appreciates the opportunity to submit this statement. We look forward to reviewing specific draft legislation and pledge our assistance and cooperation in developing sound and meaningful changes in the Act.

Mr. BREAU. Our final panel member this morning is Mr. William Blair.

Mr. Blair.

STATEMENT OF WILLIAM D. BLAIR

Mr. BLAIR. Thank you, Mr. Chairman.

Like my colleagues at the table, I have offered a written statement for the record. I would simply touch here quickly on three or four of the principal points in the statement.

I would like to say by way of introduction, Mr. Chairman, just to sort of show where I am coming from, for those of you not familiar with the Nature Conservancy, we are a private organization in the nonprofit sector set up principally for the purpose of preserving endangered species of all kinds in their natural habitats, a purpose which the new science of genetic engineering makes even more important today since the implications for the future are so enormous if we don't destroy the natural genes which are essential to that new science.

In the course of working to preserve endangered species and ecosystems, we have set up since 1973—we have helped 27 States to set up in their territories ecological inventories, inventories of the natural flora and fauna of that State.

They are contributing to the work of the Fish and Wildlife Service on endangered species, and we in turn are to some extent guided in our own conservation work by the findings of the ascertainment and listing process under the act.

Having said that, Mr. Chairman, I would like to simply emphasize some of the points in my statement—and in Mr. Bean's; I thoroughly agree with his emphasis on this—we would like to say again

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that we find, as you said at the outset of this morning's proceedings, that what we are talking about today, section 4, the integrity of the factfinding process under this act, is really central to everything that we are all trying to achieve with this legislation.

We have, sadly, today, in this country, no national inventory of our natural flora and fauna and ecosystems, where they are and how threatened they are. Many States are still relatively unsurveyed in that context.

In New Mexico for example I have noted recently it is considered that not more than 20 percent of that entire State has been surveyed from this standpoint; Arizona, perhaps half of the State at the most; and one could go on and on across the country like that.

Our inventory program, the natural heritage program so-called, the ecological inventory we set up in 1978 in Wyoming only last summer found several species that up until last summer were unknown to science.

Fortunately, only one out of five of these species was felt to be, on the preliminary evidence, in trouble. But it shows you how much we have to learn in this area and that we simply don't have an effective national data bank on it yet. Without sound information, we are not going to make sound ecological and other decisions.

We regard in the Nature Conservancy the question as to whether a species is in danger of extinction as entirely a biological question that should be based entirely on scientific evidence and analysis. The listing process should be entirely scientific. It should be kept apart from short-term economic considerations. Those considerations are germane, but they belong—as indeed I think the legislative history of the act shows that Congress has consistently felt they belong—to the processes of consultation and exemption under section 7.

For the same reason, we would say that the mandate of the act now to designate critical habitat at the time of listing should be an option, not a mandate; not a requirement.

We often simply don't know precisely, or sometimes even generally, what the critical habitat of a species is, even though there is ample evidence to convince us that that species is in danger.

So, in requiring that in most cases the critical habitat be designated at the time of listing, we are in effect asking science to go beyond its actual competence and go beyond the hard and fast evidence.

In the same way, Mr. Chairman, we would urge, because of the importance of the factfinding processes of ascertainment—because that is so central to all of the objectives of the act—it is essential that there be adequate funding for those processes if, indeed, for nothing else under the act.

Now, as I say, it seems to me whatever faults there may be or may have been in the implementation of the act to date, surely much, if not all of that, goes back to inadequate funding.

The \$1.9 million proposed for implementation next year of section 4—with no help to be expected from section 6 grant funds, which are used in part by the States for status survey work, with no help to be expected from that source—is simply not going to be anywhere near adequate for a sound factfinding job.

By way of illustration or context to that, I mention in my written statement that we ourselves, the Nature Conservancy, have inventory processes ongoing in cooperation with 27 State governments. That is roughly half of the country. We are spending for 1 year only—or those programs are spending—\$3 million this year, and only doing a part of the job; \$1.9 million for implementing section 4 is clearly going to be inadequate in that context.

I would just like to add, Mr. Chairman, that there is a whole lot of evidence to back up the assertion that I will make that short-changing the information side of this job is a false economy.

One of the things we have found in our own experience with inventory work is that as you look into species that one source or another or a group of sources say are probably in danger or in trouble, much more often than not the work, the solid scientific work that then takes place demonstrates that they are not in trouble. Far more often that happens than finding the species in question is becoming rare.

We have often had factfinding processes which we are responsible for demonstrate that species can be delisted or taken off the list of plants or animals being put forward for consideration for the listing process.

Recently in Wyoming, for example—to mention that State again, because it is one of our newer programs—the Wyoming inventory program explored 19 species which had been put forward by solid, reputable sources as candidates for Federal listing and found that out of the 19 only 5, in fact, on further exploration were in trouble and those 5 occurred on only 50 acres of ground. This is not an untypical experience.

Another point that I think deserves emphasis and perhaps has not been touched on or adequately touched on this morning is how much the factfinding process saves us, both in practice and in potential, in terms of wasteful damaging and destructive environment-versus-development conflict in this country.

We find that our own inventory programs, once they get well launched, once they have done a first cut, once they have a solid data base to work from, we find that industry calls them up every day, early in its planning processes, to find out is this going to be a good place for an access road; is this going to be a good place for a new plant or power line route; if I have options, which of these are better; what kind of trouble am I going to get into if I go here instead of going there?

These questions can now be answered with inventory processes early in the planning stages of industrial, projects as well as of government or conservation organizations like ours. Information there is saving us very expensive potential litigation and other kinds of conflict and controversy.

The factfinding processes of the Endangered Species Act are very much a part of that kind of information that I have there in mind.

I would conclude, Mr. Chairman, by simply recalling to the committee that it isn't only the Government that contributes to the preservation of our precious biological capital which we are consuming today at such a rapid rate, capital that our grandchildren are going to depend on for their progress in industry and agriculture and medicine and so many other things.

It isn't only Government that shares the responsibility for that, it is the private sector, too. Not only the Nature Conservancy, but literally hundreds or even thousands of private organizations around this country—museums, native plant societies, botanical gardens, universities, and all kinds of conservation organizations—are also contributing substantially to the preservation of what is most important in our natural heritage in this country.

They are taking guidance and assistance from the information processes under the Endangered Species Act. If those processes are deficient, inadequate, if they are biased by including considerations which are nonscientific and do not belong in the initial factfinding process, than it isn't a Government agency or group of Government agencies whose efforts are being skewed and misdirected, but it is a great army of resources also in the private sector.

Thank you, Mr. Chairman.

[The statement of Mr. Blair follows:]

PREPARED STATEMENT OF WILLIAM D. BLAIR, JR., PRESIDENT, THE NATURE
CONSERVANCY

The Nature Conservancy is a private, nonprofit organization with over 130,000 members. Our principal objective is to scientifically identify the best examples of America's ecosystem types and rare species' habitats, then take direct action where we can to provide protection for the most threatened areas and species.

Acting independently and in cooperation with Federal, State, and local conservation agencies, we have helped conserve 1.8 million acres of natural land since 1954. Included in this acreage are the habitats of 36 animals and two plants listed as threatened or endangered on the Federal list, and 70 plant species under review for potential Federal listing. We have also protected numerous State-listed species in virtually every State.

The Conservancy's expertise on this issue lies in the collection, analysis, management, and use of biological data to identify and protect species. Since 1973 we have helped establish 27 State natural heritage programs whose purpose is to provide a comprehensive understanding of the status of the States' rare species, both plants and animals. This year alone, these programs are spending over \$3 million on research. Accordingly, I will focus my remarks principally on section 4 of the act, which deals with determining the biological status of species and listing those found to be endangered or threatened.

KNOWLEDGE OF U.S. SPECIES INCOMPLETE

At a time when expanding human activity is threatening biological diversity everywhere, scientific research and survey work must be accelerated. We are virtually ignorant about the status of plants and animals in many of our states.

In Wyoming, for example, no major inventory work had been done prior to the establishment of the State natural heritage program in 1978. Just last field season several species new to science were discovered by heritage program staff, but only one was in sufficient danger to be proposed for listing as endangered. Much work remains to be done to ascertain the true status of Wyoming species.

Our knowledge base in other States is equally incomplete:

- (1) Washington reports that a significant portion of the State remains unsurveyed.
- (2) More than 50 percent of Arizona has not been adequately studied.
- (3) Over half the plant species in Minnesota being considered for the State endangered species list need more investigation and survey work.
- (4) Maryland needs at least 3 more years to determine the true status of its rarest species.
- (5) In Ohio, at least 15 species believed extirpated in the State have been rediscovered in field surveys.
- (6) Only 20 percent of New Mexico has been adequately surveyed.
- (7) In Florida, the State natural heritage program estimates that precise numbers and ranges are known for only 10 percent of the animal species possibly in jeopardy.

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ASCERTAINMENT PROCESS NOT MEETING NEEDS

Despite the need for species information in a number of States, all evidence indicates that the ascertainment and status determination process of section 4 is not working quickly and efficiently to give us answers. The Fish and Wildlife Service had listed 756 species as endangered or threatened as of December 31, 1981. Of these, 288 occur in the United States. Yet another 2,995 U.S. plants and 221 animals, according to the Office of Endangered Species, are considered potential candidates for listing—11 times the number of U.S. species already listed!

Some of these candidates have been around for years. For instance, there is only one known individual of the Pitkin marsh Indian paintbrush (*Castilleja uliginosa*), a wildflower located in California. In 1975, the Smithsonian petitioned to have this plant listed as endangered. Seven years later, it is still under review by the USFWS.

The number of listing actions, never numerous, also has declined. During fiscal years 1979 and 1980, the FWS completed an average of 46 listings per year. In 1981, only four listings were made.

The drop is explained by the Interior Department as a reflection of the desire to focus program resources on recovery of listed species instead. But since the purpose of listing is to identify precisely which species are in trouble, so that appropriate conservation actions can be set in motion, it is clear that status determination work must continue, or else there will be no chance of recovery for many species.

ASCERTAINMENT PROCESS INADEQUATELY FUNDED

The decline in productivity is directly related to reduced program budgets for both sections 4 and section 6 activities. According to the Fish and Wildlife Service, funds for implementing section 4 have dropped from \$4.1 million in fiscal year 1981 to \$1.9 million proposed in fiscal year 1983. That represents only 12 percent of the total fiscal year 1983 budget of \$16.5 million.

Equally important, grants to the States were eliminated in fiscal year 1982, and none are proposed for fiscal year 1983. Section 6 grant funds have been used by many States to conduct status survey work for federally proposed species. Clearly, properly utilized and funded, the States collectively could, and have, significantly added to the national ascertainment process now being conducted by approximately 30 Fish and Wildlife Service biologists.

INFORMATION PROVIDES THE FOUNDATION FOR THE ENTIRE PROGRAM

The scientific research and ascertainment process underpins all other aspects of the Act. Without good information, it is impossible to know which species are truly in danger, or to design appropriate strategies for conserving those that are. Without good information, the fundamental mission of the Act, protection of endangered species, may go unfulfilled. Because of this, the proper collection, interpretation, and dissemination of good biological data is the most cost-effective investment that can be made on behalf of species conservation.

An overlooked fact is that the research work and ascertainment activities undertaken by the Federal Government also provide significant guidance to state and local governments and private organizations which are active on behalf of endangered species. The Nature Conservancy, for example, uses federal data to help set its land acquisition priorities. Other private organizations, such as universities, museums, and botanical gardens depend on the list to focus their research, management, and protection activities. All of this private activity suffers directly when the federal ascertainment process bogs down.

INFORMATION RESOLVES CONFLICT

Good information about the status of species helps prevent conflicts over land use and resolve those that do occur. Some industries continue to express their fears about an Endangered Species Act run wild, with virtually every square mile of the landscape cordoned off for this species or that.

The only way to avoid this overstated dilemma is to find out what is truly rare, where examples of the species are found, and what kind of protection it needs. Far from fearing information, developers should encourage more research because better information means that many areas will be shown not to have threatened or endangered species present.

For example, the 27 state natural heritage programs are helping to remove species from state and federal lists due to research which shows these species to be more common than originally thought:

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(1) In Arizona, 18 plant species were removed from a list of federal candidates, thanks to better information.

(2) Several plant species are being recommended for lower federal status in Massachusetts.

(3) Michigan has decreased its list of animals thought rare by 30 percent.

(4) Minnesota has taken several plants off the state list.

(5) In Maryland, the number of known locations of the Bur Marigold has been increased from 2 to 9, and the recommendation has been made to drop the species from federal review.

(6) The Wyoming heritage program researched 19 plant species that were potential candidates for federal listing and found that only 5 species, occupying less than 50 acres, were actually in jeopardy. It has been the collective experience of state heritage programs that:

(1) a greater number of species of concern have been proven common, not rare;

(2) new species not known to exist in a state are being discovered there;

(3) species thought to be extirpated in a state are being "rediscovered" there; and

(4) targeted research has led to the discovery of species new to science.

Where potential conflicts do occur, the availability of objection information on the status, location, distribution, numbers and condition of a species can, if properly utilized early in the planning process, lead to positive situations in which both conservation and economic development goals are met. As Secretary Watt himself said in a December 3, 1981 news release: "We have stressed the need for government to catalogue and inventory our natural resources * * * (to) help ensure more informed decisionmaking and help avoid resource conflicts."

The experience of heritage program states supports, and conforms with, the data developed on the Section 7 consultation process. In three years, only 154 development activities out of more than 9,000 were found to pose a potential risk to species. And of these 154, all but 5 of the projects went forward. I believe that is an outstanding record of success. It shows that conservation and development interests can work together to meet their respective objectives.

ACCOUNTING FOR THE DECLINE OF ASCERTAINMENT ACTIVITY AND PRODUCTIVITY

Since the case for better information is so compelling, what accounts for the torpid pace of the ascertainment process and the decline in productivity? I believe several phenomena are at work.

First, we must recognize that the task of ascertainment is more challenging than originally supposed. The United States has never had a comprehensive survey of its plants and animals. Hence, it is all the more important that sufficient resources be devoted to status determination. Private organizations and states, through Section 6 cooperative grants, can provide tremendous assistance to the USFWS, if properly utilized and coordinated.

Second, the original intent of the 1973 Act was to establish our ascertainment and listing process, grounded in science and biology, that provides objective answers to biological questions. But over the years, increasingly complex procedural requirements and economic considerations have been inserted into the process that have added nothing to the biological determinations required but consume vast amounts of the Section 4 budget.

Together, lack of funding for research and an overly complex ascertainment and listing process have produced a program that is no longer adequately meeting the national goal of protecting our most threatened resources. Both of these defects must be corrected quickly if we seriously wish to deal with the loss of ecological diversity nationally, and worldwide.

RECOMMENDED CHANGES IN SECTION 4

Now a model of over-regulation, Section 4 needs a healthy pruning to return it to its original biological form. Specifically:

(1) Economic considerations have no place in the critical habitat process, nor in the listing determination as some have suggested.

The Act already provides a consultation and exemption process in which economics is properly and fully considered. The use of economic criteria to potentially exclude a particular area from designation as critical habitat is unwarranted and totally unscientific. Habitat designation is, and will always be, a biological question, and should be treated as such.

(2) The designation of critical habitat should not be automatically required at the same time listing occurs.

It is not necessary to identify every square inch of a species' habitat that is considered critical in order to determine that the species is in trouble. In fact Section 4 serves first and foremost as an indicator that a species is in trouble, and that further research will be necessary to determine the essential facts necessary to protect the species, including its critical habitat requirements.

We simply are not knowledgeable enough about the requirements of many species that are threatened, and it will take years of research before we are.

So the existing requirement to designate critical habitat at time of listing flies in the face of reality and does nothing but complicate and slow the listing process.

Instead of mandating an impossibility, the Act should give the Secretary more flexibility and make critical habitat designation discretionary at the time of listing. In cases where the critical habitat is known, for example in the case of a well-researched, localized plant, then habitat could be designated at time of listing. But where critical habitat is inadequately known, as in the case of a wide-ranging mammal, the Secretary should not have to designate what he doesn't know. Instead, he should have the option of separately designating habitat later after the prerequisite research is done.

It is possible to classify a species as threatened or endangered without knowing its precise critical habitat requirements. If a development project is planned in an area where a listed species is known or suspected to occur, much more detailed environmental information can then be gathered to evaluate the specific impacts of the proposed project on the existence of the species, and a biological judgment can be made.

(3) The provision of the law requiring a "ranking system to assist in the identification of species that should receive priority review for listing" has been improperly implemented. The USFWS has used this provision to rank life forms in order of importance by degree of threat. Highly threatened mammals, for example, are considered for listing before vascular plants or invertebrates under a similar degree of threat.

While I do not quarrel with the need to focus on plants and animals that are most threatened, the ranking system now used is clearly bad biology. We need status determinations going on concurrently for mammals and all other taxa. Otherwise, while we are concentrating on one class, other species will be slipping away unbeknown to us.

I believe it makes sense scientifically to replace the "ranking provision" with the requirement that the USFWS establish a strategy for status determinations and listings for each major group of life forms protected by the Act. Priority attention should go to those species most in danger of extinction, no matter what taxa they come from.

CONCLUSION

The primacy of scientific information must be restored to the Act. The accurate, objective, and prompt identification of species in jeopardy is the foundation of the entire program. Federal status determinations not only provide priorities for federal conservation activities but also affect and guide the efforts of states and local governments and private conservation organizations.

I urge this committee to carefully consider the actions discussed earlier to improve the timeliness and effectiveness of the Section 4 process. As matters now stand, Section 4 has probably become the most ineffective portion of the Act when it should be the most effective.

I would hope especially that economic considerations can be removed from the habitat designation process. Economic considerations properly belong in the consultation and exemption process. They should not be used to distort purely biological questions or to retard listing decisions.

I would also urge this committee, through its oversight function, to ensure that the collection and analysis of biological information is not short-changed in the overall program budget. Proper funding of Section 6 and Section 4 is essential in supporting a credible research effort by both the Office of Endangered Species and the states. We simply cannot inactivate the ascertainment process when so much remains to be done.

Mr. BREAUX. Thank you. I thank all of the members for this presentation.

To start off, Mr. Spinks, as Chief of the Office of Endangered Species with the Fish and Wildlife Service, Mr. Bean quotes in his testimony on pages 6 and 7 a memorandum that states that the ac-

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tions of others in the Department of the Interior blocking new listings raised "serious questions of legitimate policy decisions being precluded, circumvented or subordinated by pseudo-legalistic ploys being used as excuses for delay."

I think he has attributed that quote to you. Is that one of your statements?

Mr. SPINKS. Yes, that was in a memorandum I wrote to my immediate supervisor.

Mr. BREAUX. As Chief of the Office that is charged with a major role in Endangered Species Act administration, do you still feel that strongly about deficiencies and legitimate policy decisions being precluded and circumvented, as you stated at that time?

Mr. SPINKS. My concern at the moment, sir, was an absence of standards which would specify exactly what information was necessary for us to do our job in providing information concerning listings to others in the review process. It is my understanding that those standards are now about to be finalized. I believe we are going to basically have that situation resolved in the near future.

Mr. BREAUX. The lack of standards that you speak to in your response seems to be different from the quote that I just read, in which it seems you were pointing more to policy statements about individuals and policy decisions being subordinated or circumvented by pseudo-legalistic ploys being used as excuses for delay.

That doesn't sound like there was a lack of direction from the statute itself, does it?

Mr. SPINKS. Well, the economic analysis required for listing goes beyond the statute itself. Section 4(b)(4) of the Endangered Species Act requires analysis relating to critical habitat. There are the other analyses that are necessary for the determination of effects of rules that I alluded to in my testimony including that required by the Regulatory Flexibility Act, Paperwork Reduction Act and Executive Order 12291. This is a separate kind of analysis.

Mr. BREAUX. Are you talking about basic defects in the legislation that needs to be corrected by this committee and the Congress, or are you talking about basic defects in human personnel that are assigned to these jobs?

Mr. SPINKS. These processes are independent of the Endangered Species Act. It was a matter of establishing standards whereby we could clearly understand what was expected of us in terms of information to be provided to have an adequate analysis for the determination of effects that my memorandum was speaking to. It was not speaking to the Endangered Species Act per se.

Mr. BREAUX. Do you feel, then, that the Endangered Species Act can be carried out according to the intent of the Congress as it is, or does it need substantial amendments in order to certify the purposes for which it was intended are indeed carried out? Do we look for other statutes on the books that are causing problems?

Mr. SPINKS. There are two other statutes involved. There is also an executive order, which is not new with this administration. The same basic policy review process conducted now under Executive Order 12291 was something that was carried out previous to this administration, under a different executive order. But I do believe the existing process can be made to work under existing statutes.

Mr. BREAUX. Mr. Chairman, we will talk for a moment on this entire question you addressed about economic considerations being in fact considered in listing of critical habitat and, in fact, in listing of which species are endangered. It is a serious question whether economic consideration should play a role at all.

You say on page 8 of your testimony that economic considerations have no place in the critical habitat process. We have heard from both sides on this issue, as you can well imagine, but I find it difficult to understand a situation where you find a species that, in fact, is determined biologically to be endangered.

Consider the question that was brought up to us, the Houston toad, which was determined to be an endangered species. Someone says "well, it is found in the City of Houston. Therefore, we will rope it off and say that is a critical habitat." We will not consider the economic implementations of that.

Is that what you are saying, that economic considerations have no place in the critical habitat process?

Mr. BLAIR. No, sir, it was not. What I wanted to suggest was that the question of what is critical habitat for a given species, toads or anything else, is a scientific question. If the City of Houston were the critical habitat for the Houston toad, it is the scientist that ought to tell us that is a fact and it is evidence based on scientific biological considerations which ought to produce the finding that that is critical habitat.

There should be a second step as the act provides. The first question is what are the scientific facts? The second question is given the facts that the scientists give us, what do we do about it? Is it worth tearing down the city of Houston to save the Houston toad?

I don't think we would have trouble reaching a decision on that, but that should be a two-step process and the fact that in this hypothetical example, in order to save a particular species, we had to do an enormous economic damage, that should be considered as a second and separate process.

It is when you begin to get those economic considerations into the original scientific judgment that you are going to get bad scientific judgments.

Mr. BREAUX. I get the impression, however, that what you are saying in your statement is that first you look to the species in question and look to the biology of that species and you make a biological determination of whether that species is threatened or endangered. You make that separate from the economic considerations.

The second thing you do is after you determine that it is in fact endangered, then you designate its critical habitat.

The third thing that you would do is, if you think that the critical habitat may come in collision with economic interests, you go through the existing law, which is section 7, and try to get a determination that it, in fact, would reap undue economic harm.

Is that correct?

Mr. BLAIR. That says it better than I did, sir.

Mr. BREAUX. The problem I am concerned about is how long do you have to wait from the time after you designate a critical habitat to go through the whole process to get a section 7 exemption granted; how much economic harm we run the risk of causing by

going through that whole process of habitat designation because certain things happen at the time a critical habitat is designated. It is not stopped by section 7 process.

Mr. BLAIR. All I can say on that is if we rush into action on the basis of information that is not sound and solid, we may get prompter action, but is it going to be good action?

Mr. BREAU. The question I think the committee has to address concerns whether or not economic considerations should be involved at the point of determining what the critical habitat area is. I take it your recommendation is that no, it should not?

Mr. BLAIR. We would much prefer that short-term economic considerations should not be a part of the decision designating a critical habitat. That is correct, Mr. Chairman.

Mr. BREAU. Mr. Bean, I gave a rather extreme example with regard to the Houston toad situation, but I know a lot of people who feel, if they thought the whole city would be shut down while someone plows their way through a section 7 and through the Congress and through the three-member panel and through a seven-member Cabinet board, that somehow Houston might suffer a little bit while we wait for the process to be carried out.

Mr. BEAN. Well, I would agree you gave an extreme example, one unlikely ever to confront us. I would say this about your line of questions: In our amendment we have not suggested that economic considerations be eliminated from the critical habitat designation provision. In fact, we have retained those verbatim as they are now in the act.

What we have done, however, is to separate that designation process from the listing process. Under our amendment you could designate critical habitat at the time of listing or you could do it later. You would not have to do it at the time of listing, as you do now.

We do this because the economic considerations now required in the critical habitat designation process have essentially strangled the listing process. Moreover, by requiring judgments either at the listing or critical habitat designation stage to be influenced by what the Service thinks the economic consequences of those actions might be, as opposed to making those balancing decisions at the time of exemption requests, the act forces a balancing decision at a time when the Service knows least about the balancing to be made.

The virtue of making those balancing decisions in the exemption process is that we are presented there with a specific controversy in which a specific action is in conflict with the preservation of species.

On the other hand, if we look into a crystal ball, at the time of listing a species and imagine all of the potential conflicts that might arise, we are just speculating and coming up with a best guess, which in almost all cases is not likely to be a very good guess, about what the economic consequences really are.

Thus, there is a very practical reason to relegate the balancing decisions to the exemption process instead of having them made at the time of listing.

Mr. BREAU. I will get on to other members for questioning because of the size of the panels and number of panels that we have

today. Also, there are many members present today. The Chair is grateful.

As a little history, I know that Mr. Forsythe remembers that prior to the 1978 act that is how it used to be. We used to have a situation where you could designate the endangered species and later on do the work on the critical habitat area.

A lot of development interests legitimately brought out the point that if you listed the species and did not designate the critical habitat, you left a lot of legitimate interests not knowing what area would be affected sometime in the future. I am not sure whether that is a better situation or not.

Mr. Forsythe.

Mr. FORSYTHE. Thank you, Mr. Chairman.

I thank the panel very much.

I would like to follow up on the point the chairman was discussing. It seems to me that there is another question that is really important here and that is when a species is listed, its range should be included.

One of the problems, as I understand it, may well be that the agencies are prone to include the total range as the species critical habitat.

Do you think there is something in that area that we ought to be trying to look at?

Mr. BEAN. I think it bears emphasis that the primary function that critical habitat designations serve is to inform people, including Federal agencies and private interests, of the areas in which actions subject to section 7 will require the most careful scrutiny.

That is the principal function of critical habitat designation. As you know, the designation of critical habitat does not by itself stop any proposed development activity. It is not the equivalent of a wilderness designation or anything of the sort. It is merely an identification of an area in which special scrutiny will be required for actions subject to section 7. So understood, there is very little reason why one should insist upon a very rigorous economic analysis in the critical habitat designation process.

I would submit to you in response to your specific question that it is appropriate for the Fish and Wildlife Service, to the extent it does not harm the conservation of a species by doing so, to indicate where that species occurs, what its range is, and what areas it utilizes most, so that interests that might be affected by section 7 of the act are on notice that they have to take special care in those areas and that their activities will be under special scrutiny in those areas.

I don't think it is the case that the Fish and Wildlife Service has often designated the entire range of a species as its critical habitat. The few examples I can think of in which that has been proposed are examples in which the species was so close to the brink of extinction that in fact it was warranted, I believe, to designate the entire range, because it had been so restricted, as critical habitat.

Mr. FORSYTHE. If we have the range without the economic balancing at that point and then we have section 7, do we need a critical habitat designation?

Mr. BEAN. I think that the critical habitat provision has, as the Fish and Wildlife Service said in an earlier set of hearings, been

widely misunderstood, and the misunderstanding of the critical habitat provision has been and caused a lot of antipathy toward it.

Certainly one way of reducing that antipathy would be to eliminate it, but I think it would be counterproductive to eliminate a provision which ought to serve, and can serve, the very useful function of pinpointing areas in which action subject to section 7 will receive special scrutiny.

I think that critical habitat designation is in industry's interest and certainly in the species' interest. The identification of a range tells you where a species occurs. It doesn't tell you where, within that range, there is need for special scrutiny because of the possibility of particular damage or particular survival requirements that may occur there.

So, I would be opposed to eliminating critical habitat, although I would note that much of the controversy about critical habitat has stemmed from this fundamental misunderstanding of what it does.

Mr. FORSYTHE. Mr. Early, would you like to comment on that subject area?

Mr. EARLY. Just a brief comment. I don't think we have any concern at all about the question that is being discussed here, particularly the fact referenced by Mr. Blair of the generation of additional scientific information: Get the best information you can.

We don't obviously disagree with that. What does concern us is when you talk about critical habitats versus range. Sometimes you can look at some species that may be designated as endangered species and you look at the potential range or the historical range of those species, and it may cover the entire United States, yet over the last several hundreds of years the species may be reduced down to a State or two.

I think you have to look at the historical range and deal with it from that standpoint as to the critical range. Dr. Spencer may have a comment he would like to add to that.

Dr. SPENCER. Gentlemen, on this question we would not have any objection to the initial determination of an endangered species based on biological material and biological investigation. We do find, however, in actual practice that this information is quite superficial and not adequate.

So, our emphasis would be if we were going to go for biological only, in the original listing, let's make it a good one.

Mr. FORSYTHE. Let me follow up on that because the statute provides for use of the best available data. You say we should use adequate data. How do we define what is adequate.

Dr. SPENCER. May I give you a concrete example, sir? This spring we must do some grasshopper control work in the western prairies. The State of Nevada have submitted a list of sensitive plants in which there may be two plants in which they require 50,000 acres to be left untreated to protect that sensitive plant. In 13 other cases they ask 8,000 acres be left untreated in the grasshopper treatment area.

Now, what is not known is what period does this plant bloom. All we are using is an insecticide to control grasshoppers that does not directly adversely affect the plant. It might kill the pollinator of that plant.

We were supplied no evidence of whether the plants were rain pollinated, self-pollinated or insect pollinated. We did not know whether the treatment of the grasshopper program coincided with blooming. If it doesn't, the program has no effect on the plant.

Mr. FORSYTHE. I am not sure that that helps me all that much in defining "adequate." "Best available" seems to me might well have produced the same information that you say was missing.

Now, I would assume that in some areas there have been consultations in this manner—correct?—not initiated by your people that you represent?

Dr. SPENCER. No, sir. That was a—remember that before you begin to do the grasshopper control work, especially if it is on Federal lands, there must be some type of an agreement between the Department of Agriculture and the Department—Bureau of Land Management. And we—the Department of Agriculture has received a biological opinion from BLM asking for this exclusion.

Mr. FORSYTHE. Mr. Blair, would you care to comment on this problem of best available versus adequate information?

Mr. BLAIR. I don't think I can shed a great deal more light on that, Congressman Forsythe. I am sorry. Best available seems to me like a good, down to Earth, commonsense definition. I would just come back to my favorite hobbyhorse, which is to say that if enough resources aren't put into the factfinding process, it isn't going to be the best available.

Mr. FORSYTHE. Nor adequate.

Mr. BLAIR. Nor adequate, no, sir.

Mr. FORSYTHE. Thank you.

Mr. BREAU. Mr. Tauzin.

Mr. TAUZIN. Mr. Early, you made some interesting comments at the conclusion of your testimony with reference to the dominance of the human race and your concern. One of my constituents from Louisiana who has lived among the alligators for a long time suggested he was often glad the dinosaurs were gone. But that is not really the problem today.

Really, we are basically up against not a contest of survival between our species and some others, but the question of whether or not the nature of a given life form up against you for some social or economic activity is weighed in the balance as to which one becomes the important social decider.

I wonder if you could maybe elaborate for me. Under what circumstances do you think we should suffer the irreparable loss of a specific life form on this planet in favor of some human activity? What circumstances, when do we reach that horrible decision in your view and decide in favor of human activity?

Dr. EARLY. I think it's obvious we all decide in favor of mankind in the situation. I thought it was rather interesting, as I had a chance to look through some of the various States listing the endangered species. I did find one State listed homo sapiens as an endangered species. I think that is quite appropriate. I am sure it was done in jest, but maybe not so much in jest.

As we look at the amount of agricultural land we are losing in this country every year, some 40 million acres every year, we have to replace that land. The thing we are talking about here is a balancing act that must be considered—that is land to grow food or

set aside for environmental concerns. We are not up here today to say here is a smoking gun and we have killed all these various projects and production is down.

We are not here to gut the act because we are strong supporters of what the act is trying to do. We are just asking that the Congress look at it from a reasonable standpoint.

Mr. TAUZIN. I am trying to get specific. Can you envision a case where for the sake of economic gain we should decide a given life form should be rendered totally extinct on our planet?

Dr. EARLY. I can visualize that. Let me go back to an area Dr. Spencer talked about, that is the grasshopper control program in the Midwest that goes all the way from Texas up to the State of Washington. The last several years we have had some very serious threats of some of the worst outbreaks of grasshoppers or locusts, if you want to call them that, that we have seen in years. If we follow the full potential of this act and go out with all the States listing a number of plants and insects and butterflies and everything else, we could eventually somewhere along the line, based on analysis of the various species prevent any application of pesticides to the whole Midwest. That way we are going to give up wheat and corn production in our society.

And I don't think we want to do that. That sounds like there is an alarmist way out there somewhere, but I think you have to think in terms of long-term effects this act may have. We need some economic balancing at this point, or we could close down Midwest agriculture.

Mr. TAUZIN. You speak for balance. I don't think anybody objects to that. What I am concerned about is the hard case where some economic activity is on the balance on one side and the total loss of extinction of a life form on our plan at the time is on the other side of the balance.

In what case, can you give me a specific, would you make the decision in favor of the economic activity?

Dr. EARLY. On a specific species, for example?

Mr. TAUZIN. Any example, if you can. I mean, how important must the economic activity be for us to suffer the total irreparable loss of a life form on the planet?

Dr. EARLY. I think one could extrapolate so far to say that any species is expendable somewhere along the line except for mankind. One could almost make that statement. I think most of us would not disagree with that. So ultimately, you could make that decision, every species is expendable somewhere along the line except for mankind.

It really gets down to being a judgment call on whether we can, as a society live economically, from an esthetic standpoint without a particular moth that is an endangered species in some State or whether we can't. These are some tough decisions to make. Maybe Dr. Spencer has a specific example.

Dr. SPENCER. So many of your endangered species occupy a small habitat, maybe only one natural spring. Let's say the agricultural activity in that area is pumping water for irrigation from the aquifer that lowers the level in that particular spring. And since that organism exists only in that spring, how do you continue to use that aquifer without hurting that species?

Mr. TAUZIN. Do you continue to use it if it means you will lose the species completely?

Dr. SPENCER. It may be unavoidable to do so. Now remember, every living form of life on Earth is included in this act, including soil microorganisms and so on. It is impossible to plow a field without adversely affecting some of the literally hundreds of species that are in that soil. Now on this endangered species, actually, wherever we can, wherever we can possibly protect the species from an avoidable extinction, that is good.

But remember this act has gone much, much further than endanger of extinction. It no longer treats with extinction. It treats with diversity of wildlife. For example, in New Mexico, where we have over 100 species listed as endangered or threatened, better than 51 percent of them are only peripheral to the State and are not endangered in the major part of their range, only within that State. Thirty-eight States now have, are using the act to obtain biological diversity, not to protect the species from extinction.

Mr. TAUZIN. Of course, you know, we can have a great horrible controversy over the question I asked of when if you ever allow the total extinction of a species. There is much room for argument. In regard to how you manage the question of species that are sensitive or in some way endangered.

Mr. Blair, I would like to get to that point with you. You mention the fact that unnecessary and wasteful conflicts between the environmental protection and development should certainly be avoided and that if the act produces that consequence, it needs some work.

The undersecretary of the department of wildlife and fisheries in Louisiana testified earlier here to the effect that he was convinced that the Endangered Species Act is not functioning as it was intended by Congress. The State agency which has worked with the act on a daily basis strongly recommends immediate changes so Louisiana's management programs can progress in an orderly fashion.

He mentioned specifically the problem of improper listings. He mentioned the fact that species on the 68 list were placed on the 78 list without updating. That in fact had the States been allowed to input properly in the 78 listing, that the alligator would not have been listed in Louisiana. I can tell you from experience sitting on the wildlife committee in Louisiana, trying to unlist the alligator in many parishes where the population was simply exploding, that I tend to agree with him. What do you see in response to his comments on that point?

Mr. BLAIR. Sir, I think what I would offer on that is, we are sort of prisoners of the state of knowledge at any given time. And I am sure mistakes have been and others will be made. I think the phrase we were talking about a minute ago with Congressman Forsythe, "best available" kind of sums it up. We have to go with the best available information we have at any given point. If we find we have made mistakes, we have the machinery for correcting them later.

Mr. TAUZIN. They also said it took 3 years in order to finalize its petition for relief. That of course troubled me and troubled him a great deal. If we are subject to those mistakes because of improper

information, I have heard a lot of that day on the panel, and simply are burdened with the lack of information, if we are subject to those mistakes, should it take 3 years to correct them?

Mr. BLAIR. No, sir, I would have to agree that it should not.

Mr. BREAU. The time of the gentleman has expired.

Mrs. SCHNEIDER.

Mrs. SCHNEIDER. I would like to pick up on the discussion we were having insofar as the role that States were playing.

Mr. Early, you mentioned in your testimony that the Endangered Species Act was essentially, and I use your word, cloned in 38 States. I am wondering, are you really suggesting the States should be precluded from adopting their own endangered species act?

Mr. EARLY. I think what I am really suggesting here and I thought the word clone would be appropriate in our science and technology today, what I am suggesting here is that, what Dr. Spencer alluded to and what we were just talking about on the alligator situation here, that a number of species, may be just peripheral to a particular State.

It may be that the State is looking for diversity within their own State. Yet in other States this particular species may be a pest. I think we have to look very carefully and closely as to whether or not the States should be allowed to continue extensive diversity out there in order to protect a certain species within their own state that is common or even a pest in other States.

So I think we need to question whether or not the States should go so far as to push for endangered species or citation of a species in their State, yes.

Mrs. SCHNEIDER. In order to have a more comprehensive national Endangered Species Act, don't you think it would be necessary to have the cooperation of the State in the review and investigations on the part of the States?

Mr. EARLY. I agree that in this effort to get better knowledge and information, we have all agreed on here, you need to involve the States. They need to get the best scientific information available as to where the species is, how it exists, what numbers are and where the ranges may be, so gathering information is very critical, I believe.

Mrs. SCHNEIDER. But you don't believe each State should not only gather that information but have their own act?

Mr. EARLY. I agree they should gather their own information. I sometimes question whether or not they should go so far as to have their own act out there.

Mrs. SCHNEIDER. Mr. Bean, in your testimony you indicated you thought it was very important that, in your first point, we require review of various State lists. Do you think the State acts are also necessary?

Mr. BEAN. I think they are. I must say I think Dr. Early is in the wrong room here. There is nothing in the Endangered Species Act that imposes any obligation or any duty whatever upon any entity by virtue of the fact that some species is listed on a State list. There is no Federal obligation under this act that imposes any duty in that respect at all.

So if he has complaints about what States are doing with their State lists, he ought to take that up with the appropriate State regu-

latory bodies. It's not an issue here unless he proposes, as you suggest, that Congress forbid the states from having their own endangered species lists which include species not listed by the Federal Government.

What I have proposed is that the Fish and Wildlife Service review the lists of endangered or threatened species prepared by State agencies, professional scientific organizations, and international agencies with a view to the identifying from those lists which species are appropriate candidates for listing under the Federal act.

If it is the case that some States are listing as endangered species in their States peripheral populations of species that are common in other States, my amendment would not require those species to be listed as federally endangered species. In fact, it would disqualify them from further consideration. The fact that they are on State lists means only that they get looked at, but the look can be very short.

For example, if an abundant species nationally appears on a particular State list, the fact of its national abundance is going to disqualify it from further consideration. So I don't think his complaints undercut my suggestion at all.

Mrs. SCHNEIDER. Mr. Early, you had also mentioned in your testimony that you felt many times some of the different lawsuits that originated as a result of this act were really designed to delay or block different projects. I wonder if you might have a series of examples, specific examples that could exemplify that remark?

Mr. EARLY. I am sure Dr. Spencer could, if he may respond to that.

Dr. SPENCER. It's very unfortunate for all of us, for the administrators of the act and so on, that the act can be used in this regard. In other words, it is a very effective tool in the hands of an activist group for delaying a project to which they have an objection that is entirely separate from interest in any endangered species.

In fact, there have been any number, the Tellico Dam, they went out looking for a species that could stop it. There are a number of other cases in which—

Mrs. SCHNEIDER. Could you state some of those cases specifically, please?

Dr. SPENCER. Well, now, remember the Gray Rocks Dam project? After the plant was two-thirds of the way up, they created a critical habitat for the whooping crane, 275 miles downstream. And as a result of that, the plant was temporarily stopped by court action.

Now the argument there was actually an argument over water between the States of Nebraska and Wyoming. And this was a tool to get at further release of water down the Platte River.

Mrs. SCHNEIDER. Do you have some other examples? Those are two so far.

Dr. SPENCER. Off the cuff, it's kind of hard to remember. I would be pleased to supply you a list, if I may, at a later date.

Mrs. SCHNEIDER. I would certainly appreciate that, if we could include that in the record, Mr. Chairman, that would also be appreciated.

[The information follows:]



NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION

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Dr. Jack D. Early
President

April 15, 1982

The Honorable John B. Breaux
Chairman, Subcommittee on Fisheries
and Wildlife Conservation and the
Environment
U. S. House of Representatives
Washington, D. C. 20515

Dear Congressman Breaux:

In accord with the commitment we made to the Subcommittee at the hearings on reauthorization of the Endangered Species Act, March 8, 1982, I am submitting the accompanying information on endangered species involvement in twelve important (though sometimes controversial) water projects. The endangered species have not always been the pivotal issue in the controversies that developed, but it is clear that the potential for repeating the costly and objectionable confrontations characterizing the Tellico Dam/Snail Darter issue has not been solved.

We respectfully request that the attached be made a part of the hearing record.

Sincerely,

Jack D. Early

JDE/lk
Attachment

cc (w/attach.): Subcommittee members

SUPPLEMENTAL STATEMENT OF
DR. DONALD A. SPENCER, CONSULTING ECOLOGIST,
NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION
FOR INCLUSION IN THE RECORD OF
THE MARCH 8, 1982 HEARINGS
ON THE ENDANGERED SPECIES ACT
BEFORE THE
SUBCOMMITTEE ON FISHERIES AND WILDLIFE
CONSERVATION AND THE ENVIRONMENT, OF THE
COMMITTEE ON MERCHANT MARINE AND FISHERIES,
U. S. HOUSE OF REPRESENTATIVES

ENDANGERED SPECIES INVOLVEMENT IN WATER PROJECTS

Environmental Law: A Troublesome Maze

Complying with a score of environmental laws that have come into being in the last 20 years has become a cumbersome, time-consuming, and very expensive exercise for established societal programs and economic growth. Unique in this complex of legislation is the Endangered Species Act (ESA) whose actions are not accountable for any costs they may impose.⁽¹⁾ Thus the ESA becomes one of the most effective means of challenging a program to which there is multi-based opposition.

This use of the ESA has not escaped the attention of dedicated preservation groups. For example, in an article appearing in Audubon Magazine, March 1977, decrying the expansion of phosphate mining in Southeastern Idaho, this comment occurs:

"The Endangered Species Act of 1973 might be employed in specific cases to buy time to avoid disastrous mining consequences."

Water Projects Have Few Alternatives

Water related projects seem particularly vulnerable to the Endangered Species Act for two reasons. First, the project cannot be moved to an alternate location to avoid the adverse effect. Second, the flooding of a riparian area to form a reservoir, or the marked lowering of stream flow, can drastically change the habitat for wildlife. Such projects commonly provoke opposition on many fronts, but almost

(1) See Appendix A.

invariably that opposition will eventually include some plant or animal species that will be threatened or endangered. It is fairly obvious in the examples on the following Table No. 1, that the opposition to the projects was only peripherally interested in the endangered species, but on occasion endangered species become the pivotal factor. It is interesting to note in these examples on how many occasions an animal or plant was listed as endangered only after the project was underway and other efforts to block the project had met with little success. (2)

Reacting to the "Potential" - Not Always Affordable

The Endangered Species Act imposes its priority status for a species only after it has been listed as threatened or endangered; and for its habitat only if designated as "critical." (3) But that is not how it works out in actual practice. (4) An agency, or permittee, may be notified by the Office of Endangered Species (OES) that a petition has been received to consider listing a given species. This sets off a series of

(2) See Appendices B, E, C, and D.

(3) ESA Sec. 7(a)(2).

(4) "Although there are presently no officially listed threatened and endangered plants in the action area ... and species formally proposed for listing have no legal status under the Endangered Species Act, every Federal Agency should recognize these species may become officially listed at any time and may have subsequent influence on actions of Federal Agencies." From: Biological Opinion, July 28, 1978, Regional Director, Region 2.

Table No. 1

WATER PROJECTS AND ENDANGERED SPECIES INVOLVED*

B	TELLICO DAM Little Tennessee River	Snail Darter (3-inch fish)	. Listed late in constr. . Delays & mitigation . Project in operation
C	COLUMBIA DAM Duck River, Tennessee	Birdwing/Monkeyface Pearly mussels	. Listed late in constr. . Delays & mitigation . Proj. stalled by End. Sp.
D	GRAYROCKS ELECTRIC POWER N. Platte River, Wyoming	Whooping Crane critical habitat	. Off-site: Listed very late in construction . Mitigation + \$7,500,000
E	O'NEILL IRRIGATION PROJ. Niobrara River, Nebraska	Whooping Crane	. Off-site: C.H. not listed . Court injunc/other issues . Stalled before constr.
F	MERAMEC LAKE Meramec River, Missouri	Gray Bat Higgin's eye Pearly Mussel	. Listed before proj. . Local support lost . Terminated at plan. stage
G	NEW MELONES DAM Stanislaus River, Calif.	Petition for 2 sp. Harvestmen (cave spiders)	. Formal list never made . Other factors in court . Operating below capacity
H	DICKEY-LINCOLN HYDRO. St. John River, Maine	Endangered plant Furbish Lousewort	. End. problem unresolved . Other economic problems responsible: deauthorized
I	SEATTLE HYDRO/ELECT. DAM Skagit River, Washington	Bald Eagle	. Off-site: downstream feeding sanct.; City backed off after \$500,000 study
J	MOON LAKE POWER PROJ. Bonanza, Utah	Colo. Squawfish	. Off-site: Listed before proj. mitigation & \$500,000 . Constr. pending
K	TENN-TOMBIGBEE WATERWAY Alabama/Mississippi	Petition status 5 sp. mussels	. Not listed . Constr. well underway
L	LIBBY RE-REG DAM Kootenai River, Montana	Bald Eagle	. Listed before proj. . Resolved after study . Stalled by other issues
M	MCPHEE DAM Dolores River, Colorado	Peregrine Falcon Blackfooted Ferret	. Listed before proj. . Mitigation . Proj. continuing
N	WHITE RIVER DAM Utah County, Utah	Colo. Squawfish 6 other species	. Listed before proj. . Mitigation measures accepted . Proj. active

* Letters in the left column signify referenced appendices.

field studies to ascertain if listing as endangered or threatened is justified - which can require two years. A Section 7 Consultation may elicit a biological opinion ⁽⁵⁾ from the U.S. Fish and Wildlife Service that recommends suspension of construction (or operation) despite the fact that the affected site has not officially been designated a "critical habitat," as required. ⁽⁶⁾ For example, a biological opinion from the Department of the Interior to Tennessee Valley Authority ⁽⁷⁾ states, "... each of these activities (for the conservation of the Birdwing and Cumberland Monkey-face Pearly Mussels) must occur prior to final closure of the dam" The biological data accompanying the above say for each species, " ... but critical habitat has not yet been determined for the species."

Impacts From Far Afield

Understandably, any new project or program will focus on the environmental problems, and their solution, in its immediate area. Since the purpose of the ESA is to provide a means whereby "ecosystems" upon which an endangered species depends may be conserved, ⁽⁸⁾ the planners can be trapped by events

(5) ESA Sec. 7(b)(a).

(6) ESA Sec. 4(a)(1).

(7) Biological Opinion, signed by Lynn Greenwalt, 1979 (FWS/OES 375.4).

(8) ESA Sec. 2(b).

far afield, and as of that time undisclosed. For example, the designation of a critical habitat for the Whooping Crane, 300 river miles away, after the Grayrocks project construction was 80 percent complete, cost the Grayrocks project dearly. ⁽⁹⁾

The Office of Endangered Species may invoke a basin-wide study to identify other yet-to-be constructed projects that may impact the same species or its habitat. The sum of these future projections may be used in determining jeopardy for a project that, by itself, poses little or no significant effect. ⁽¹⁰⁾

The Economic No! No!

The Endangered Species Act, its administrators, and its proponents, are not obligated to consider the costs of their programs in dollars spent and natural resources embargoed. In fact, the legislation specifically forbids it. ⁽¹¹⁾ But the price tag is inescapable. Congressman John Myers of Indiana is reported to have said on authorizing Federal funds to transplant the Snail Darter, "The Snail Darter may be small, but it's damned expensive." ⁽¹²⁾

These special item expenditures are but the tip of the iceberg when all costs attributable to protection of endangered

(9) See Appendix D; Also see other "off area" endangered species problems in Appendices I, J, M, and N.

(10) Biological Opinion, Dec. 8, 1978, U.S. Fish & Wildlife Service to Rural Electrification Administration.

(11) U.S. Supreme Court Opinion, TVA vs. Hill, 437 U.S.

(12) See Appendix O.

species are considered. Table No. 2, the Environmental Price Tag, shows how many categories of expenditures occur "below the water line." The pre-project studies can be unbelievably expensive and take several years to complete. But project delays are probably the most crippling. What price is the public paying when the Columbia Dam sits inactive for several years while we learn how to successfully transplant a few endangered mussels? What is the interest on the public funds invested in the project, and that of cooperating agencies who have already built the necessary grids to deliver the water?

The oft-repeated testimony before Subcommittees of both the Senate and House avers that the ESA has functioned very well, in that only 154 consultations out of approximately 9,600 were found to "likely jeopardize" an endangered species. Without having all of the 9,600 biological opinions to study, we interpret this to mean that 9,446 projects had no problems involving endangered species. Of the 154, where possible jeopardy was found, only a handful backed away from the modifications and mitigations required of them. In some cases the committed investments were too large to even consider backing off. In others, those costs could be absorbed by increasing the service charges to the customers, who have no voice in the matter. Whether in each case these alternative solutions ⁽¹³⁾ offered by the Office of Endangered Species

(13) See Appendices B thru N.

Table No. 2

ENVIRONMENTAL PRICE TAG*

Pre-Project studies: Inhouse or outside contracts.

- . Area plant surveys, including rare species
- . Area wildlife surveys, including endangered species
- . Area archaeological, historic and cultural studies
- . Potential impacts on off-site environments, the ecosystem
- . Impact of project-related human population increases on area environmental components

Costs and time lapse in complying with the National Environmental Policy Act (NEPA)

- . Scoping hearings for public input
- . Draft environmental impact study (EIS), its preparation, printing and distribution
- . Staff analyses of public comment on draft EIS
- . Final EIS, print and distribute

Staff and time lapse in agency consultation (ESA Sec. 7) leading to numerous Federal and State licenses, permits and easements

Legal expenses involved in answering challenges in court

- . Often involves shouldering legal fees of opponents

Costs of additional court-ordered environmental studies

- . Costs of preparing and publishing supplemental EIS

Costs of modifying construction to meet dictated measures

Costs of other mitigation requirements:

- . Purchase of land to replace wildlife habitat lost
- . Purchase of adjoining lands for recreation
- . Providing operational funds for conservation measures administered by other agencies or preservation groups
- . Building and operating a fish hatchery
- . Other functions as dictated by the Act's full scope of remedial measures

Increased construction costs due to project delays

Loss of services that might have been available at an earlier date

Loss of tax revenue on private lands purchased for wildlife mitigation

* Economic considerations of the Endangered Species Act built into the established environmental system pursuant to the requirements of the statute and its prospective alleviation of "adversity" to the ecosystem.

were "reasonable and prudent" depends largely on whether one subscribes to the position that any species in trouble is of "incalculable value."

There will come a time when the Public, outside the coterie of preservationists, is going to look at an expenditure of \$1 million to protect an obscure plant, the San Diego Mesa Mint,⁽¹⁴⁾ and say, "Wasn't there a less expensive way of providing such protection?" To insure that the questions stop there and don't progress to, "What are we spending such sums for when our society cannot fund its own welfare ills?" some attention has to be given to amending the ESA to achieve a more realistic (as opposed to an idealistic) program. Congress in amending the Endangered Species Act in 1978 sought changes that hopefully would thereafter avoid situations like that of the 3-inch fish that successfully blocked the use of a nearly completed public works - the Tellico Dam - until Congress itself intervened. But that expectation has not been realized.

(14) Vernal Pool Mitigation - The Caltrans Experience.

APPENDIX

APPENDIX "A"

REFERENCE TO ECONOMIC IMPACT IN THE ENDANGERED SPECIES ACT

There are two references to the consideration of the economic impact in the Endangered Species Act. One is in Sec.4 (b)(4) where it states:

"...the Secretary shall consider the economic impact ...of specifying any particular area as critical habitat...unless he determines...that the failure to designate such an area as critical habitat will result in the extinction of the species."

If designating an area as critical habitat will not result in the threatened extinction of the species, how then is it critical habitat? If it is truly critical habitat then no economic consideration is to be given.

The second rather oblique inclusion of economic consideration is in the exemption process (Sec.7(h)(2)(A)).

The Committee shall grant an exemption...if it determines:

- (i) There are no reasonable and prudent alternatives to the agency action;
- (ii) The benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest;
- (iii) The action is of regional or national significance.

Going to a Cabinet level Committee for exemption is a measure of last resort, and has not been used since Congress mandated the review of the Tellico and Grayrocks cases. Consideration of economic impact by the Committee is limited to those projects of "regional or national significance," thus providing no solution to local and state problems. Furthermore, the exemption process takes a full year to consummate following lengthy Sec. 7 Consultation requirements. These delays in securing project approvals can be disasterously costly. For example, the Committee accepted an out-of-court settlement of the Grayrocks case, a solution not based on merit. Basin Electric Power was faced with paying \$140,000 a day interest on money already committed to construction of the plant and could in no way afford going thru the above exemption process. By establishing a \$7,500,000 trust fund for a distant, off-site, conservation project, they satisfied the preservation litigants.

BEST DOCUMENT AVAILABLE

TELLICO DAM
Little Tennessee River

The dam on the Little Tennessee River has a long history. Congress provided funds for construction in 1942, when the project was estimated to cost \$10.7 million, but which ended up 37 years later costing something like \$139 million. The 2nd World War effort terminated that first attempt, and it wasn't until 1963 that the project was re-initiated. This impoundment was controversial from the very beginning. The first challenge in the courts that held up construction for 21 months occurred in 1972, largely on the basis of loss of agricultural lands, the Indian culture, and the free-flowing river.

In 1973, an aquatic biologist from the University of Tennessee collected specimens of a small fish from the Little Tennessee River that proved to be a new undescribed species, subsequently named Snail Darter. In October 1975 the U.S. Fish & Wildlife Service listed it as an endangered species. For the next four years this tiny fish was the center of attention nationwide. Even the U.S. Supreme Court became involved. Not until Congress itself took a hand in the 1978 amendments to the Endangered Species Act were the gates in the dam closed and the project allowed to become operational.

In those last four years TVA put a great deal of effort into finding an alternate solution to ensuring the continued existence of the Snail Darter without abandoning the reservoir project. Their scientific skills and persistence resulted in the successful establishment (by transplant) of a self-sustaining population of Snail Darters in the Hiwassee River. Subsequent transplants were made to the Holston River.

As of 1982, more intensive searches have turned up populations of Snail Darters in South Chickamauga Creek near Chattanooga, in the Sequatchie River, and in Sewee Creek below Watts Bar Dam. Dr. David Etnier, who discovered the Snail Darter in the first place, believes darters in these new locations were there all along. Consideration is now being given to reducing their status from endangered, to the less restrictive "threatened" classification.

The Tellico experience is reason to put greater emphasis on the quality of the biological criteria used for listing, and the more balanced consideration of the different options available for achieving endangered species protection and recovery.

BEST DOCUMENT AVAILABLE

COLUMBIA AND NORMANDY DAMS ON THE DUCK RIVER

The six-year planning period for this project (1964-69) involved much public participation. First, the Upper Duck River Development Assn. (4 counties, 1700 members). Next, the Tennessee Legislature created the Tennessee Upper Duck River Development Agency, followed by the 4-County Upper Duck River Regional Planning Commission. Finally in 1968 TVA issued Planning Report No 65-100-1. Congress, in turn, reviewed and authorized the project December 11, 1969. Estimated completion date: 1977. The Normandy Dam began construction in June 1972, and was completed and put into operation in 1976. The (lower) Columbia began construction in August 1973 with no operational date yet in sight.

The draft Environmental Impact Statement was circulated in June 1971, and the Final EIS in April 1972. A supplement to the final EIS on the Duck River Project was circulated in June 1974. A still later report from TVA to OMB discussed new information and project alternatives.

The Columbia Dam has been plagued by a series of Court cases challenging the project on every conceivable basis. The first case was brought by the Duck River Preservation Assn. in 1972 on the basis that the EIS was inadequate. Unsuccessfully.

In June 1976, several mussels found in the Duck River were added to the Endangered Species list and TVA so notified. A Sec. 7 Consultation resulted in a biological opinion that the Columbia "will jeopardize" two endangered mussels (1977). This was repeated in a biological opinion requested by the Corps of Engineers in May 1978. A re-initiation of Sec. 7 Consultation requested by TVA brought the following decision from the Office of Endangered Species (USDI - 1979):

"It is my biological opinion that completion of the full project as planned would not jeopardize the continued existence of the two species if, prior to inundation, TVA were to assure the FWS that it had completed, with proven success, the conservation program (here) described."

The bottom line in the conservation program outlined by USDI is contained in the following:

"TVA must, in coordination and with the assistance of the FWS, develop, carry out, and complete with proven success a conservation program for the birdwing pearly mussel and the Cumberland monkey-face mussel. Each of these activities must occur prior to final closure of the dam and determination of the extent of water impoundment."

The program involves (but only in part) successfully transplanting the mussels to other sites in the Duck, Clinch and Powell Rivers. But transplanting a mussel that is parasitic on certain fish during part of its life cycle is proving to be an involved task. TVA in 1982 has not solved the problem despite heavy commitments to research at two laboratory sites.

BEST DOCUMENT AVAILABLE

GRAYROCKS RESERVOIR
Laramie River: S.E. Wyoming

Missouri Basin Electric Power Cooperative (MBEPC) serves 200 municipal and coop-owned electric systems in 8 states. MBEPC elected to construct the 1500 MW, 3-unit coal-fired Laramie River Station to provide power both east and west of the continental electrical separation for this extensive power network.

Extraordinary steps were taken in the planning program to ensure the best environmental assessment. The regulatory requirements for this project resulted in a stack of papers nearly three feet tall. Thirty-two separate books were prepared for the project, which contained about 5,000 pages, or more than one and a quarter million words, prepared by a half dozen different consulting firms. The printed copies of the Environmental Impact Assessment weighed a total of 17,500 pounds and cost approximately \$1.2 million.

Despite this attempt to smoothly integrate the project into regional economic, social and environmental complex, and after approved construction was well advanced, two late-surfacing events took place. First, on May 15, 1978, nearly two years after the Final EIS was approved, a stretch of the Platte River bottoms some 300 river miles downstream from the plant site was declared "critical habitat" for a migratory stop-over of the endangered Whooping Cranes. Second, the State of Nebraska, the National Wildlife Federation and the Audubon Society filed suit aimed at, "preventing construction of the Grayrocks Dam." (1) The U.S. District Court in October 1978 rescinded the Corps of Engineers Sec.404 dredge and fill permit for the dam.

Faced with interest on money already invested in the project - some \$140,000 per day - that prohibited consideration of any lengthy litigation, MBEPC agreed to the following out-of-court settlement.

- A. Creation of a \$7,500,000 trust fund for maintenance and enhancement of the Whooping Crane's critical habitat along the Platte River.
- B. Ensure certain minimum releases into the Platte during various periods of the year.
- C. Replace up to 11,250 acre feet of water from Grayrocks to Nebraska if an agricultural irrigation district becomes operational in the future in Wyoming.

NOTE: All in all there were 10 stipulations on MBEPC.

(1) Press release, National Audubon Society. Wording attributed to Ron Klataske, Regional Representative for Audubon

APPENDIX "D"

The Biological Opinion, resulting from a Sec.7 Consultation was addressed to the Administrator of the Rural Electrification Administration, Dec. 8, 1978, from Lynn A. Greenwalt, Director, USF&WS. In addition to a "requirement" to "establish an irrevocable trust for the maintenance and improvement of Whooping Crane habitat on the Platte River" adds the following:

"Require the Basin Electric Power Cooperative to replace any water removed by the Grayrocks power project (estimated to average 23,000 acre feet per year). Replacement must equal or exceed the amount removed in any given year, and must be done in a manner that closely approximates the flow that would occur if the water were not removed in the first place."

Question: If MBEPC must replace the water it uses, and it is the diminished flow of water that adversely affects the Whooping Crane habitat, how then is the project adversely affecting the Whooping Crane?

If it were possible, as requested above, to make no change in the water flow as the result of the power plant operations, why is Grayrocks "required" to donate a trust fund to Whooping Crane conservation?

PROPOSED O'NEILL IRRIGATION RESERVOIR
Niobrara River: Nebraska

This proposed reservoir on the Niobrara River in North-Central Nebraska would be capable of surface irrigating 77,000 acres of cropland, and in addition contribute to ground water recharge that would expand another 22,000 acres from sustainable well pumping. If no provision is made for diverting water for irrigation from the Niobrara River then the 170,000 tillable acres relying solely on wells will dewater the aquifer that has a natural recharge capable of irrigating only 90,000 acres.

Congress authorized the project in October 1972. By this date both a Draft and Final Environmental Impact Study (EIS) had been filed. Almost immediately the project met with opposition from conservation/preservation organizations intent on keeping the Niobrara River free of impoundments. In June of 1975 an organization called, "Save the Niobrara River Assn." filed suit in U.S. District Court on the basis of an inadequate EIS and won an injunction stopping construction. Subsequently, in August 1978, the U.S. Fish and Wildlife Service (F&WS) proposed making the section of the Niobrara flowing thru Brown, Keya Paha, and Rock Counties (115,200 land acres) critical habitat for the endangered Whooping Crane (proposal not carried to final rule). Then in 1980, The Nature Conservancy purchased 54,000 acres that front on the Niobrara River for 22 miles, which will be impacted by the reservoir. The Conservancy views the Niobrara Valley as one of its most valuable acquisitions.

Subsequently the Bureau of Reclamation has produced three thick volumes evaluating all the possible alternatives to the preferred action and found none as feasible and cost-effective as the reservoir proposal. BR also contracted for an intensive "Niobrara River Whooping Crane Habitat Study." The field studies identified just what monthly water releases from the proposed Norden Dam would be necessary to maintain the braided streambed favored for night roosting by whooping cranes migrating thru the area.

Mitigation of the endangered species problem now seems well within reach, but the free flowing stream concern is still unresolved and construction tied up in the courts. Ten years have past since Congressional authorization.

NEW MELONES LAKE
Stanislaus River - California

The New Melones Dam was authorized as early as 1944, but construction was not initiated until July 1966, the contract for the dam and spillway the fall of 1972. It is a 625 ft. high dam impounding some 2,400,000 acre feet of water at full pool. The hydro/power plant at the dam has a rated capacity of 300 megawatts. A major use of water is the irrigation of 92,000 acres of cropland and vineyards - an integral part of the Central Valley Project. Estimated cost in 1972 was \$181 million.

The location is in the Mother Lode foothill region of Central California, rich in pioneer history and archaeological sites. The upstream reservoir area has large limestone bodies with over 70 known caves. Upstream from the dam a white-water rafting segment of the river will be flooded out at full pool. Downstream the Stanislaus River supports a spawning area for salmon. These features provided ample bases for opposition to the dam. The earliest court action (June 1972) was brought by the Environmental Defense Fund on the legal sufficiency of the EIS.

While there was abundant wildlife in the area forming the reservoir pool, no then listed endangered species were resident. In April 1975, G.H. Meral petitioned the U.S. Fish and Wildlife Service to consider listing as endangered two species of harvestmen (cave spiders) that he had found inhabiting the caves that would be flooded by the project. The Office of Endangered Species undertook a status review of the proposal, but after further field surveys found these same harvestmen in off-site caves, the listing process went no further. But for a time the threat of another Tellico-like confrontation was very real, as the accompanying news item indicates.

The dam was completed in 1979 with most mitigation measures met or agreed to. But the project is not operating at capacity as ongoing court cases between the State and the Bureau of Reclamation on water distribution are still being litigated.

THE TINY CREATURES

Much has been made recently of the absurd situations resulting from the 1973 Endangered Species Act (ESA).

A three-inch fish called the snail darter snagged the \$116-million Tellico Dam in Tennessee. The Furbish lousewort, a smallish plant, loused up a giant power station project in Maine. The tiny orange-bellied mouse nibbled away plans to build a power plant near San Francisco.

Now comes the New Melones Harvest Man Daddy Longlegs, a dime-sized, blind, spider-like insect that has entangled California's \$340-million New Melones Dam in a web of environmental intrigue.

This humble creature, which we will refer to simply as a spider, may represent the last straw. By serving as a possible threat to the dam, the spider could well be even more of a threat to the Endangered Species Act.

From: North Dakota Outdoors,
N.D. Game & Fish Department
February 1979

BEST DOCUMENT AVAILABLE

DICKEY - LINCOLN SCHOOL DAMS
St. John River: Maine

The Dickey-Lincoln School Lakes (D-L) project was authorized in 1965. Two dams on the St. John River were to be constructed: the upper dam to impound 7,700,000 acre feet of water inundating 86,024 acres. The lower dam (Lincoln School) to serve for re-regulation and as an afterbay for pumpback would store some 86,355 acre feet of water. Ninety eight percent of the project would be involved in peak load generation of electricity. Total rated capacity of both units is 2.46 billion kilowatt hours annually. The project would also serve for flood control.

Early on the Corps of Engineers (COE) undertook comprehensive studies of the impacted area involving the participation and coordination of other Federal and State Agencies and the public. Unfortunately the cost of construction plus the mitigation of resources lost by inundation of 80,455 acres behind the Dickey dam were so costly (1) and controversial that Congress in December 1981 de-authorized the Dickey Dam but retained limited funds to further evaluate the smaller Lincoln School Dam.

Early in 1976, the U.S. Fish & Wildlife Service furnished COE a list of plants that were suggested as being rare or endangered and that might be found in the D-L project area. COE then contracted with Dr. Charles Richards, Professor of Botany, University of Maine to make a survey of the D-L project site for these plants. Dr. Richards re-discovered along the banks of the St. John River a number of small colonies of the Furbish Lousewort, which later in April 1978 was listed as an endangered species by USF&WS.

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- (1) The complete mitigation proposal requires aquisition by fee title of 124,710 acres of land (all but 500 acres to be adjacent to the Allagash Wilderness Waterway). The total first cost will be \$42,994,000 and the annualized (management) cost from \$2.4 to 4.3 million. Not included in the above is the loss of annual net growth of timber, estimated at 25,825 to 34,525 cords. On the 124,210 acres of the proposed mitigation purchase wildlife management practices will significantly reduce timber production as practiced commercially.

It was determined that the Dickey reservoir would destroy about 35 percent of the known lousewort colonies. A Biological Opinion in June 1978 from the USF&WS stated that the D-L Project "...would not likely jeopardize the continued existence of the Furbish Lousewort," if some six different conservation actions were taken. One of importance was finding successful methods of establishing the species in other locations. This is proving more difficult than anticipated. Reproductive and transplant studies thusfar conducted have not been successful.

The future of the Lincoln School Dam may well be decided on factors other than endangered species. However, until off-site propagation is achieved, the Furbish Lousewort can command priority for the sites it now occupies.

PROPOSED SKAGIT RIVER DAM
Seattle, Washington

The City of Seattle investigated the feasibility and environmental impact of constructing a hydroelectric re-regulating dam above Copper Creek on the Skagit River downstream from three other impoundments (Ross, Diablo and Gorge reservoirs) that they already operate. But downstream, a relatively few miles from the proposed dam site, is the Skagit River Bald Eagle Sanctuary where these raptors congregate each winter to feed on spawned-out salmon. An environmental assessment prepared for Seattle City Light indicated that any adverse effects of the project could be mitigated.

The City Council in 1979 decided to look into the matter more thoroughly and authorized a two year in-depth study on the possible effects of the project on bald eagles, together with a study on the effects on the food base of these birds, the spawning salmon run. Three detailed reports resulted, at a reported cost of \$240,000.

Skagit River Chum Salmon Carcass Drift Study
By: Glock Bierly & Associates, June 1980

Impacts of a Proposed Copper Creek Dam on Bald Eagles
By: BioSystems Analysis, Inc June 1980

Impacts of a Proposed Copper Creek Dam on Bald Eagles:
Second Winter Study. BioSystems, September 1981

With this new information at hand, supplemented by comments on a draft Environmental Impact Statement, the Seattle City Council on April 27, 1981 decided not to pursue an FERC license to build the hydroelectric facility. The first of six reasons given:

The numerous and significant environmental and social impacts of the Project, many of which cannot be satisfactorily mitigated.

The impact of the proposed project on wintering bald eagles was one of the significant environmental/social impacts for which it appeared that satisfactory mitigation could not be accomplished. But not the only one.

The City Council benefited by an informal Sec.7 Consultation with the Office of Endangered Species, USDI, but there was never a formal determination under the Endangered Species Act because the project was not pursued to licensing.

BEST DOCUMENT AVAILABLE

MOON LAKE POWER PROJECT
Deseret Electric Coop. Bonanza, Utah

Deseret proposes to build a fossil fueled power plant (two 400 megawatt generating units) just northwest of Bonanza, Utah. Up to 2.7 million tons of coal would be moved annually from an underground mine north of Rangely, Colorado by a 35 mile-long electric railroad. Water for cooling (21,720 acre feet) would be piped 19 miles to the plant site from a system of collector wells alongside the Green River. The water right is owned by Deseret.

Three public scoping meetings were held by BLM-REA and Deseret in 1979, followed by the preparation of both a Draft Environmental Impact Statement (EIS) for public input, and a Final EIS circulated in April 1981.

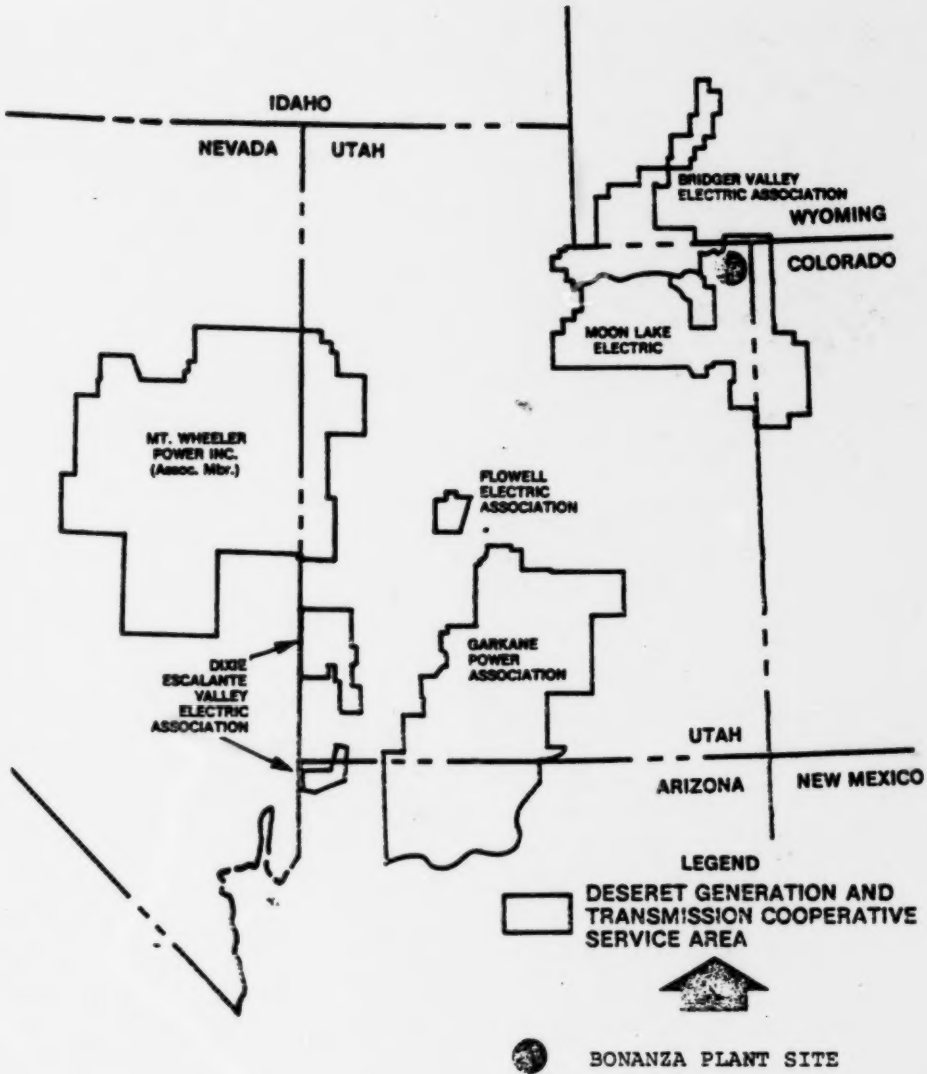
Unfortunately this is a region where potential sources of energy are abundant - coal, oil shale, gas and minerals - but all other natural resources, exclusive of surface area, are almost totally utilized. For example, there is too little water; grazing lands, while extensive, are of low carrying capacity; tree cover at lower elevations is confined to narrow riparian strips, etc. Thus all projects to utilize the energy resources encounter a veritable barrage of environmental opposition. Every facet of Deseret's plan to provide the necessary power base for energy development, as well as electricity for their grid serving six rural electric distribution cooperatives (see accompanying map) has an attending array of costly restrictions and mitigation measures.

As for the endangered species role, the Green River is the habitat of three fishes, the Colorado Squawfish, the Humpback and Bonytail Chubs. The Biological Opinion resulting from a Sec.7 Consultation (1) reads:

Deseret will either:

- A. Negotiate a contract for the purchase of up to 30.5 cfs (22,089 acre-feet) of Flaming Gorge water from WPRS (note: to replace water Deseret owns and proposes to remove from the Green River) or
- B. Agree to fund their fair share of activities developed for the purpose of financing studies and/or programs designed by the FWS to conserve the endangered fish species in the Colorado River system in an amount not to exceed \$500,000.

(1) Letter to the State Director of BLM from the USF&WS, Area 5 Salt Lake City office, Jim Tisdale, May 13, 1981



SERVICE AREA OF DESERET GENERATION
AND TRANSMISSION COOPERATIVE

BEST DOCUMENT AVAILABLE

TENNESSEE-TOMBIGBEE WATERWAY
Alabama/Mississippi

The Tennessee-Tombigbee Waterway now under construction is a link between an existing 16,000 mile inland waterway system at its northern terminus and a deep water port at Mobile, Alabama. Actually it is a link between the northern terminus of the existing Warrior-Tombigbee Waterway reaching north out of Mobile 213 miles, and the Tennessee River Waterway another 232 miles further north. Congress funded the project in 1971, and construction got underway in 1972. The overall project is approximately 61 percent complete as of November 1981. Upon operation it will serve 14 states.

As is typical of most water projects, the Corps of Engineers (COE), builders of TTW, have had their share of legal challenges (opposition) to the project. The resolutions of the court cases have favored proceeding with construction, but not without volumes of data from new field studies. The COE has an excellent track record for the quality (and numbers) of its wildlife and environmental studies. Incidentally, besides major archaeological and cultural studies along the Tombigbee river, the Corps has been requested to purchase up to 100,000 acres off-site as a mitigation for wildlife habitat losses on the canal rights-of-way.

The Endangered Species Act (ESA) has been more of an undeveloped threat to project design and operation than an actuality. The Corps of Engineers respond to such warning signals and through field studies are prepared to justify the actions they have taken that might involve endangered species, listed or not. In the Federal Register for April 11, 1980 this statement appears:

"Specimens of (Curtus' Mussel and Marshall's Mussel) have never been taken outside the Tombigbee River System. The most obvious threat to the continued existence of these species is the U.S. Army Corps of Engineers Tennessee Tombigbee Waterway."

Three other species of mussels were named in the above "Notice of Status Review" by the U.S. Fish & Wildlife Service, species that "might" be involved in TTW construction. In still another communique, the Corps was advised to examine the impact of TTW on six species of small fish (including four species of darters) listed as endangered, threatened or rare by the State of Mississippi. Official listing by the U.S. Fish & Wildlife Service of the named mussels has not taken place.

Since there is no point in the project construction period when an endangered species cannot be listed, and at that time require project adjustment (or halt), these latent actions involving endangered species are always a problem.

LIBBY RE-REG. DAM
Kootenai River: Montana

The existing Libby Dam on the Kootenai River in Northwestern Montana is a unit in the comprehensive development of the Columbia River Basin under terms of the Columbia River Treaty with Canada. This 420 feet high concrete dam was essentially complete by 1973. Four power units (turbine/generators) were initially installed in the powerhouse at the dam, with four additional units just recently added. The eight units have a maximum hydraulic capacity of 40,000 cubic feet per second, generating a possible 840 megawatts of electricity to meet peak demands.

The Libby Dam and Lake Kootenai Environmental Impact Study (EIS) was circulated in 1972; the Libby Reregulating Dam At-Site Power EIS in July 1973. Two supplements to the EIS followed. Thus opposition to the second phase of the project - construction of the reregulating dam 10 miles downstream - developed quite late in the program (1978), in a suit brought by the Libby Rod and Gun Club, the Montana Wildlife Federation, and the Montana Wilderness Assn., alleging the inadequacies of the EIS that had been available for comment for 5 to 6 years.

A reregulating dam is essential for controlling the powerful surges of water released during peaking power operation at the Libby Dam. The opposition must therefore not only contest the construction of the lower reregulating dam, but question the need to develop this energy source at all. The U.S. District Court in granting an injunction that halted the project accepted both goals. The Court ordered the Corps of Engineers (COE) to make a complete review of alternate means of meeting the Northwest's energy needs. COE has now responded with additional volumes of data and field studies - but litigation continues with the second phase of construction and operation at a standstill.

The Endangered Species Act was a part of the initial legal challenge, pointing to the use of the open water (tailrace) in the Kootenai River immediately downstream from the Libby Dam as a wintering (feeding) area for the endangered Bald Eagles. The Corps contracted with a leading raptor biologist, Dr. John J. Craighead, to make an on-site study of the wintering population of bald eagles. Management methods were revealed during this study that would mitigate any significant adverse effect on these birds - and the Court agreed.

Whether more electric power is presently needed is beside the point. If planners don't look at least a decade down the road we are in real trouble because the lead time for major generating facilities is up to 17 years.

McPHEE DAM
Dolores River: Colorado

This reservoir is being constructed in Southwestern Colorado, an arid land subject to extremes in drought, that even in the late 1200's AD drove the ancient people - the Anasazi - from the area, never to return. The dam, downstream on the river west of Dolores, Colorado will impound some 381,000 acre feet of water; supply annually 126,000 acre feet to irrigate 61,660 acres of cropland; supply municipal and industrial water to four communities, and make sustaining release of 25,400 acre feet of water to the Dolores River for fish and wildlife.

From the very onset of planning, the Bureau of Reclamation (BR) gave full attention to the environmental regulations impacting the site. Chief among these considerations was the known fact that an ancient, agriculturally-oriented people had occupied the area from about 500 AD to 1000 AD. BR contracted with the University of Colorado to make an archaeological survey. Between 1972 and the present, in what is described as "...the largest (archaeological) project in the world awarded a single group," the project has unearthed 1200 occupied sites, 2.4 million artifacts, in four excavation seasons. The archaeological program thus far has cost about \$6 million. Other environmental concerns appear to have been handled with equal success (given money and time).

The endangered species problem surfaced very early with the U.S. Fish & Wildlife Service's comment on the Draft Environmental Impact Statement (1977):

"We believe it is necessary to assess cumulative impacts which will result from the many projects on the Colorado River...to more fully evaluate possible alternatives which may be less harmful to endangered fish species, particularly the Colorado Squawfish and the humpback chub. We are preparing surveys of the critical habitat areas of these two species at this time (JANUARY 1977) and it would be prudent to hold any new construction in abeyance until these critical habitat areas have been delineated."

The BR did not agree that it was necessary to delay the project until the ecosystem-wide hazard to the habitat of endangered fish could be fully assessed. In fact, critical habitat for the Colorado Squawfish is still in the unofficial state as of April 1982.

Giving full play to environmental concerns, no matter how marginal they might be, is a desirable practice, PROVIDED there is no hurry to have the new project or program operational, and, funds so expended could not be employed elsewhere to better advantage in wildlife conservation.

BEST DOCUMENT AVAILABLE

WHITE RIVER DAM
Uintah County, Utah

Planned to be constructed and operated by the Utah Division of Water Resources, drawing on water rights accorded the State in the Upper Colorado River Basin Compact. The 105,000 acre feet capacity reservoir will principally supply water for energy development (oil shale) but includes a Ute Indian-held irrigation right.

Field studies to meet the requirements of NEPA began after filing a request for a "rights-of-way" permit from the Bureau of Land Management to use 3,560 acres of public lands for the reservoir in 1965. A draft EIS was circulated by BLM in November 1980 for public comment. The final EIS, which includes these comments, is scheduled for release in June 1982.

A request for a Sec. 7 Consultation with Interior's Office of Endangered Species was made in February 1980, followed by a request for extension in August 1980. The resulting biological opinion from the OES was not issued until February 1982 (two years).⁽¹⁾ This biological opinion concluded that the White River Project was "not likely to jeopardize the continued existence" of six named species if the conservation measures for the Colorado Squawfish were faithfully carried out. Those requirements, in part, are as follows:

- A minimum of 250 cfs average monthly stream release, increased to 300-700 cfs between June 15-July 31, augmented from inactive storage during critically dry years.
- Between June 15-July 31 the minimum daily temperature of the released flow will be at least 19° C.
- Monitor a suspected spawning site on the White River 15 miles below the dam, being prepared to conduct an enhancement program if required.
- Attempt to establish a Colo. Squawfish population in the reservoir and upstream; develop a reservoir fishery using native species only.
- Determine the feasibility of squawfish passage around or through the dam.
- Participate in a forthcoming conservation plan for the Colo. Squawfish that may include contributing a share of the manpower, equipment, materials, or equivalent funding for hatchery planning, site selection, design and fish stocking.

(1) Letter to Utah State Office, Bureau of Land Management, from Robert H. Shields, Director Reg. 6 USF&WS, Feb. 24, 1982 FA/SE/BLM-White River Dam (6-5-80-F-222)

Mrs. SCHNEIDER. Mr. Early, in your testimony along the same lines you had indicated you thought that the person who was responsible or the party responsible for initiating the lawsuit should be required to post a bond that would cover the cost of any of the delays that might be caused by the suit. I am just wondering if I could have some comments by Mr. Blair or Mr. Bean on that proposal.

Mr. BLAIR. Mike, do you want to comment?

Mr. BEAN. I don't think he's demonstrated a necessity for such a proposal. Moreover, I think the suggestion Dr. Spencer has given us in response to your question about examples where this act has been misused are hollow and vacuous. He represents, for example that the State of Nebraska's real interest in the Grayrocks litigation was water. I will submit to you that one of the principal plaintiffs in that organization was the National Wildlife Federation which could not have cared less whether Nebraska or Wyoming had the water.

Their interest was clearly in protecting the whooping crane. Likewise, with respect to Tellico Dam, he alleges that people went out and looked for a species to stop that dam. In fact, TVA searched about 300 stream sites and was unable to find the snail darter anywhere but in the Little Tennessee River until after the controversy was over. It was recently discovered elsewhere.

I suggest to you that at the time of Tellico the best available information was that that project would not only jeopardize the survival, but in fact extirpate, the species from the only known area where it naturally occurred.

I would like the opportunity, if I may, to respond to whatever submission Dr. Spencer makes about other examples.

Mr. BREAUX. Without objection, everybody will have an opportunity to respond to everybody else's submissions.

[The information follows:]

RESPONSE OF MICHAEL J. BEAN,
ENVIRONMENTAL DEFENSE FUND,
TO THE SUPPLEMENTAL
STATEMENT OF DONALD A. SPENCER,
NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION

At page 5 of his written statement presented at the March 8, 1982, hearings, Jack D. Early, President of the National Agricultural Chemicals Association, alleged that there were "many cases" under the Endangered Species Act in which private actions had been brought "on an irresponsible basis." Pressed by Representative Schneider to cite specific examples to support that allegation, Mr. Early deferred to his colleague, Mr. Spencer, who, after reciting the altogether inappropriate examples of Tellico and Grayrocks Dams, was unable to recall any others and requested permission to submit a supplemental statement describing other examples.

Mr. Spencer has apparently forgotten the question to which he was asked to respond, for his supplemental statement contains no other examples of "irresponsible" lawsuits brought by private plaintiffs under the Endangered Species Act. Indeed, for most of his purported examples, there has never been any lawsuit initiated under the Endangered Species Act.

Thus, for example, although Mr. Spencer's supplemental statement dwells at length on Columbia and Normandy Dams, the O'Neill Irrigation Reservoir, New Melones Dam, the Skagit River Dam, the Moon Lake Power Project, the Tennessee-Tombigbee Waterway, the McPhee Dam, and the White River Dam, the simple fact is that for none of these projects has a lawsuit under the Endangered Species Act ever been filed. As for Tellico and Grayrocks Dams, the failure of these examples to support Spencer's allegation has been adequately addressed in my responsive remarks at the hearing itself.

Unable to offer any credible examples to support his assertion, Mr. Spencer turns instead in his supplemental statement to a broadside attack against various facets of the Endangered Species Act. That attack only damages Spencer's credibility further, for it is rife with errors, partially correct statements, and significant omissions. Rather than catalog these in detail, the following will simply point out a few of the errors made in Spencer's discussion of but one project, the Columbia Dam Project of the Tennessee Valley Authority. First, Spencer asserts that the project was authorized by Congress in 1969. In fact, the project has never been specifically authorized by Congress since TVA water projects are not subject to specific congressional authorizations. Second, Spencer alleges that 1972 lawsuit

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challenging the adequacy of the project's EIS was unsuccessful. In fact, the court agreed that the EIS was grossly inadequate and directed that a supplemental EIS be prepared to correct the deficiencies of the original EIS. Third, Spencer implies that the Fish and Wildlife Service acted improperly in issuing a biological opinion regarding the project before designating critical habitats for the endangered species affected by it. In fact, contrary to Spencer's assertions, the designation of critical habitat is not required prior to the issuance of a biological opinion, nor is designation of critical habitats for these particular species -- all listed prior to the 1978 amendments to the Endangered Species Act -- required at all. Finally, although Spencer decries the loss of interest on the public funds invested in this project while mitigation measures for endangered species are tested, he neglects to note that TVA first began pouring concrete at the Columbia Dam site in the month following the Fish and Wildlife Service's request for consultation. That action prompted the Assistant Secretary of the Interior to protest in writing to TVA that it was "literally setting your decisionmaking in concrete, at the estimated cost of \$40,000 per day, and presuming the completion of the Columbia Dam and the flooding of the affected endangered species habitat." Thus, if there has been a waste of public funds in connection with Columbia Dam, that waste is not attributable to the Endangered Species Act but rather to TVA's zeal in defying it.

Mrs. SCHNEIDER. Mr. Blair, did you want to comment on that issue?

Mr. BLAIR. No; I agree with what Mike said.

Mr. BREAU. Let me ask just a couple more questions. I think you brought up the question that Executive Order 12291 requires economic analysis for any Federal regulatory action. It is the economic analysis on economic effects of that action that has caused the endangered species program a lot of grief and many problems. Mr. Spinks, if the subcommittee determined that a 12291 analysis should not be done on a listing of an endangered species, do you think it would be necessary for us to amend the act in order to accomplish that?

Mr. SPINKS. Mr. Chairman, I am really not in a position to speak to that technical question in terms of the proper way to proceed in the legal sense.

Mr. BREAU. We need to address that. Is one of your points, Mr. Bean, that having to do an economic analysis at the time a species is listed has in fact prevented a number of species from ever being listed?

Mr. BEAN. Yes; that is my point. Executive Order 12291 imposes the requirement of economic analysis, but only to the extent permitted by law. That is to say, the Executive order imposes no requirement of analysis if the statute precludes the consideration of economic impacts in promulgation of the regulations under it.

I submit to you that by virtue of section 4(b)(4), requiring economic analysis of critical habitat designation, and section 4(a)(1) linking that requirement with listing, the administration is able to use the Executive order as a way of exploring the economic impacts of listing prior to listing, and thus preventing all but the listing of a handful of species like the example I gave from the National Zoo.

Mr. BREAU. You and your groups are in no way recommending that economic analysis not be done. Would you elaborate on when and how you think they ought to fit into the picture?

Mr. BEAN. Clearly the most important stage where the most rigorous economic analysis should be required is in the section 7 exemption process. Indeed, the statute is already carefully designed to insure that in the section 7 exemption process there is a careful weighing of the economic, social, biological, and other factors involved in any of these tradeoffs. It clearly belongs there. We would not propose to change that in the slightest.

Mr. BREAU. Isn't there some way we can address that problem without having to go through an entire section for appeal or exemption process, section 7, before we designate what a critical habitat is?

Mr. BEAN. The amendment I have offered with my testimony would retain the requirement for economic analysis at the time of critical habitat designation. It would retain that verbatim as it now is found in the act. It would separate that, however, from listing. So I would keep it in there and I would keep it in the exemption process.

Those, it seems to me, are the only two occasions where it is legitimate. To do it at the time of listing is not legitimate, in my view.

Mr. BREAUX. The panel will make a recommendation that the act be amended to allow consultation between Federal officials and private interest groups prior to the time a Federal action takes place; that is, an application for a permit, their recommendation being that if the Feds were allowed to be brought into the process at an earlier stage, perhaps modifications could be accomplished which would allow the project to go forth with a minimum amount of impact with regard to the endangered species.

Anybody have any problems with that recommendation?

Mr. Bean.

Mr. BEAN. I think it is certainly worthy of careful exploration. We would like to do that.

Mr. BREAUX. Dr. Early, the last question. We had a witness on the last set of hearings which addressed the problem in a particular State with prairie dogs and the use of a chemical, 1080, to try to control prairie dogs. Apparently they felt that approval of 1080 was not allowed to go forth because of its potential impact on an endangered species.

I asked the question, had they tried to go through the exemption process saying, look, the economics of this are so bad, there is so much destruction by the prairie dog that this chemical should be permitted despite its potential adverse impact on an endangered species. They indicated they did not know that would be available and I guess there is a legitimate question as to whether there is enough Federal involvement in granting a permit for a chemical to generate the exemption process from going into effect.

Do you have any thoughts on that?

Dr. EARLY. I am not sure where that 1080 stands right now. Dr. Spencer may have more knowledge on that than I do.

Mr. BREAUX. I am not asking specifically about the chemical but suppose your industry wanted to use a particular chemical to eradicate a problem.

Dr. EARLY. Yes.

Mr. BREAUX. An endangered species officer said, "We are not going to recommend approval of this chemical because it might have an adverse impact on another endangered species in that area." Do you feel that is enough Federal involvement to generate a section 7 exemption process to be initiated?

Dr. EARLY. Well, the limited experience we have had with EPA which is responsible for developing the labels under which we sell our products, and we carry a provision within our regulatory process that says we must recognize the endangered species and that has been in the act for a long time, I think we have had consultation with EPA, there has been consultation with the Department of the Interior.

Obviously, my industry would like to take part in this along with agriculture in making sure the process is clearly thought through and that we do have the opportunity to bring forth economic reasons as to why we think the project should go ahead. I don't think I could ever say there is always too much opportunity for that sort of thing. We need more of it.

Mr. BREAUX. Mr. Tauzin had another followup question. If anyone else does, we will let you be recognized. Mr. Tauzin.

Mr. TAUZIN. Thank you, Mr. Chairman. All of you gentlemen have referred to things you would like to see the act do in addition to what it's doing now. You mention perhaps an economic analysis at the time of exemption process. Some of you complained about the slowness of additions to the list. Mr. Blair, you have mentioned the problems were ranging and the need for status determinations concurrently for animals and all forms of life, at the same time similarly threatened.

Just to follow up on the last question I asked with reference to the 3-year time period it took to delist the alligator in Louisiana in nine parishes, it turns out that the service complained that it didn't have the right information. In the final analysis, information used 3 years later to delist the alligator was substantially the same information submitted 3 years earlier.

It appears the truth was the agency simply couldn't get around to doing the work for a 3-year period. What concerns me is that we add cost analysis and exemption process, and we hasten the listing process and add all these status determinations. Can the agency, the service, possibly do a good job administering the protection of those listed species, those that they have apparently found to be important to this date, whether they can't keep up with the workload today? Any one of you?

Mr. BLAIR. Yes, sir, that seems to me just a clear-cut example of why we need more resources. There have been all sorts of suggestions made, not today, but in the general discussion of this whole act and reauthorization process of: Is the Fish and Wildlife Service doing it well enough? Should other agencies be involved? Should the National Academy of Sciences be involved? Should the Nature Conservancy be involved, and so on?

We are not getting good enough information. We are not going to get good enough information from anybody, sir, until we have adequate resources going into this job. That is the problem, as I see it. I have great confidence in our Fish and Wildlife Service but nobody, however good, with their hands tied is going to do a big job and do it well.

Mr. TAUZIN. In this case they had the correct information 3 years earlier. It took them 3 years to do the job because they were so busy trying to do the job in other areas?

Mr. BLAIR. I wasn't trying to defend them. If they already had the information, I am not that familiar in detail with the case. That sounds like a bureaucratic goof-up but my basic point is I think they are overburdened trying to do a very large job.

Mr. BEAN. Mr. Tauzin, again, the amendment we have offered, I think, would address the problem you have raised. Among other things, our amendment would revise somewhat the provision of the act that governs citizens petitions for listing actions.

Under our amendment, if a citizen, including the Louisiana Department of Fish and Game or anyone else, petitioned for a change in the status of a species, by adding it, taking it off, changing from threatened to endangered, and so forth, and presented substantial evidence that their proposal was warranted, Fish and Wildlife Service would have an obligation to propose that as a formal proposal published in the Federal Register and to make a final decision within 1 year thereafter.

I think, frankly, if you eliminate, as we have proposed, the consideration of economic impacts from these listening decisions, 1 year is ample time to decide questions such as that. So I think our amendment would avoid the repetition of any bad examples, if there are any, that have plagued the Fish and Wildlife Service.

Mr. TAUZIN. Mr. Spinks.

Mr. SPINKS. If I could take the opportunity to touch on two points here. First the point the chairman made earlier concerning the prairie dog situation in South Dakota. We had a very productive meeting last Friday between ourselves, Environmental Protection Agency and NACA representatives. During the course of that meeting, EPA indicated to us that since April of 1980, more than 500 pesticide registrations processed through their agency, only 3 percent of those invoked any kind of formal section 7 consultation.

Of that number, 11 were jeopardy opinions, but in all instances, there was a reasonable and prudent alternative that was worked out through modification of the labeling process to alleviate a controversy.

With regard to prairie dog control and South Dakota specifically, the Fish and Wildlife Service consulted with EPA more than 2 years ago concerning the registration of an alternate chemical product, zinc phosphide, as I recall, and there was a no-jeopardy opinion on that particular issue.

With regard to the 3-year period for delisting the alligator, I happened, because the subject was raised by Dr. Newsome during his previous testimony, to have gone into the background of that, sir. I would be pleased to either tell you now or furnish for the record an explanation of what happened in those 3 years.

There was a continuing effort and continuing dialog going on during that time. It is not something that fell through the cracks.

Mr. BREAU. If the gentlemen would yield I would appreciate it. Basically what it involved was the Federal Government not trusting information being supplied by the State when in truth and fact the only information existing anywhere was that provided by the State of Louisiana. There was just a tremendous hesitancy on the part of the Federal Government to acknowledge, No. 1, that it existed, and No. 2, not to accept it.

We went through that battle month by month, Mr. Tauzin and I, he on a State level and I here on this committee. We can talk about things falling through the crack.

Before I recognize Mr. Forsythe, I would like to address the point made by someone on this panel that there are insufficient funds for the endangered species authority within Fish and Wildlife. This subcommittee and our full committee has recommended an increase of \$4.8 million over the administration budget to carry out the functions of the Endangered Species Act. Lack of adequate funding works both ways.

It hurts environmental concerns and hurts developmental concerns if it's not adequately funded.

Mr. Forsythe.

Mr. FORSYTHE. Thank you, Mr. Chairman. I have just one other question. This does stem from the testimony we got in the last hearing from the last two witnesses, the two scientists that testified about primarily the various lower forms of life that are in-

volved in this whole endangered species concern. I suggested that maybe we really ought to be working on the foundation of all our life rather than kind of starting from the top.

Very hopefully we can see that coming down the road. But I know we are spending, for instance, in one species in particular, rather large numbers of money to try and find a way to restore the California condor to existence. And while I would hate to see that particular species disappear, I am not sure we aren't going to have to start looking at some priority choices in this whole arrangement.

I would like to have a comment really starting from you, Mike, and Mr. Blair, and then anybody else that would like to.

Mr. BEAN. I would respond to your comment by reiterating something that I assert in my testimony, something which I emphatically believe. That is, notwithstanding what you have already heard from a number of sources that the Fish and Wildlife Service has a priority system which gives priority attention in listing to mammals first and then birds and reptiles and so on, down to the bottom to plants and invertebrates and so on, my sense is that is a paper system only.

The real priority system, insofar as new listings of species are concerned, gives highest priority to those species whose listing will impinge least upon any economic or commercial interest. What that translates into is a system that gives preference in listing to those species least likely to benefit from listing.

So I think the question you present is a fair and legitimate one. I don't have an answer to it but I think you should be aware of what is really going on in the Fish and Wildlife Service today in terms of what the listing priorities really are.

Mr. FORSYTHE. Well, I don't think I said what they are, and I am not going to debate that particular issue because I think it really draws from what I hope I can get is an answer that goes to the sense of my question, regardless of where we are right today.

Mr. Blair.

Mr. BLAIR. I would just offer two quick points, Congressman Forsythe, and I do so reluctantly and hesitantly because I am not personally a scientist. But my scientific colleague, on the point about lower orders and so forth, my colleagues tell me that to the best of their knowledge there is really no scientific basis for setting that kind of a priority system between vertebrates and invertebrates or higher plants and lower plants or whatever.

That the potential values are equally great, at least until we know more about the species concerned. Are you going to give away a fungus, for example, which might produce penicillin? But the larger point—to try to address what I take to be the larger thrust of your question—that is a terrible specter. As you, I am sure, know better than I, there is a strong body of scientific opinion which says we should not under any circumstances let any species go.

Looking down the road, all I can tell you is that what we as an organization are doing to address that problem in the context of our own capabilities is we are trying to find the places where the most endangered species in the ecosystems come together, set a priority system accordingly and go after those places to protect them first.

I would hate to think, I don't want that to be translated into saying I am recommending letting everything else go. We are in favor of saving every species that we can. But that is the closest to an answer I can come to. You have to set some priorities.

Mr. FORSYTHE. Thank you.

Mr. BREAU. In fairness to everyone involved, a lot of these problems have been around awhile. It's not only this administration or the last one. Executive Order 12-291 requiring the economic analysis, I take it, is a President Carter administration initiative. They started trying to wrestle with that problem and tried to handle it in the way they thought was correct.

It has just been extended and perhaps, Mr. Bean, you would say exacerbated at the present time. This panel has given us some insights and explored some areas which I think the committee will continue to look very carefully at. We thank you for your testimony.

I think it's been very helpful. This panel will be excused as we welcome up our second panel for this morning.

I would ask them to take their seats at the witness table. Mr. Ron Lambertson, Associate Director for Federal Assistance with the Fish and Wildlife Service. Mr. John Hall, vice president, Resources, Forest Products Association. Mr. Jerry Haggard, attorney, representing American Mining Congress, Mr. Ken Berlin, who is with the National Audubon Society. Mr. Lindell Marsh, with Nossaman, Krueger & Knox, a law firm, who will be presenting testimony.

As this panel is getting seated, I would also acknowledge the presence of Mr. Rob Thornton, former counsel to the Fish and Wildlife Committee, who will also be appearing with Mr. Lindell Marsh.

We have you listed as Lambertson going first. We would be pleased to receive your testimony.

STATEMENTS OF RONALD LAMBERTSON, ASSOCIATE DIRECTOR FOR FEDERAL ASSISTANCE, U.S. FISH AND WILDLIFE SERVICE; ROBERT L. CARLTON, JR., MANAGER, WILDLIFE AND NON-TIMBER RESOURCES PROGRAMS, NATIONAL FOREST PRODUCTS ASSOCIATION; JERRY HAGGARD, ATTORNEY, REPRESENTING AMERICAN MINING CONGRESS; KEN BERLIN, NATIONAL AUDUBON SOCIETY; LINDELL MARSH, ATTORNEY, NOSSAMAN, KRUEGER & KNOX, ACCOMPANIED BY ROB THORNTON

Mr. LAMBERTSON. I welcome the opportunity to appear before your committee. In keeping with your directive, I will summarize my statement and submit the full statement for the record. My statement sets forth in some detail the formal section 7 consultation process with which I am sure you are familiar.

As you know, the act requires Federal agencies to consult with the Secretary if their actions may adversely affect listed species. This consultation must be concluded within 90 days or be extended by mutual agreement. The consultation results in a biological opinion which determines whether the proposed agency action is likely to jeopardize continued existence of a listed species or result in the destruction or adverse modification of its critical habitat.

My testimony also reviews in some detail the biological assessment process where by agencies, which are involved in construction projects, request from the Secretary a list of species which may be present in the project area. If the Secretary advises that species may be present, the agency under that process, then conducts a biological assessment to determine the impact of the proposed project upon the listed species.

My testimony contains figures about the consultations which our agency has conducted during the last 3 years. These figures show that during the last 3-year time period we have experienced a 50-percent decrease in the annual number of formal consultations, that is, in 1979 we conducted 980 formal consultations, down to 483 formal consultations in 1981.

At the same time we have witnessed a 50-percent increase in the number of informal consultations. In 1979 we conducted 1,583 informal consultations, up to 3,500 informal consultations in 1981. In my view, Mr. Chairman, this demonstrates that Federal agencies have now incorporated the protection of endangered species into their planning processes and are solving potential problems before they occur.

My testimony states that only two proposed projects have gone through the exemption process, those being Tellico and Gray Rocks. Mr. Chairman, it is the policy of our agency, if humanly possible, to accommodate projects which are authorized, funded or carried out by Federal agencies in a manner consistent with our responsibility to protect and provide recovery for the listed species.

We have numerous examples of where this has occurred. With that brief summary, Mr. Chairman, I will be glad to answer any questions.

Mr. BREAU. Thank you, Mr. Lambertson. We will get into questions later.

[The statement of Mr. Lambertson follows:]

PREPARED STATEMENT OF RONALD LAMBERTSON, ASSOCIATE DIRECTOR, FEDERAL ASSISTANCE, U.S. FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

Section 7 of the Endangered Species Act (ESA) of 1973, as amended, states that each Federal agency shall insure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of Endangered or Threatened species or result in the destruction or adverse modification of Critical Habitat unless granted an exemption by the Endangered Species Committee. It also states that all Federal agencies shall utilize their authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of Endangered and Threatened species. The mechanism through which the Federal agencies accomplish these goals is consultation, informal and/or formal.

Through informal consultation, which may range from a single telephone call to a face-to-face meeting, the Service provides information and assistance to the Federal agency or the designated non-Federal representative without going through the formal procedure of rendering a biological opinion. For major Federal actions significantly affecting the quality of the human environment, a species list is provided to the agency, upon request, on whether any listed or proposed species may be present in the area of the proposed activity. This species list is then used by the Federal agency or the designated non-Federal representative to conduct a biological assessment. The purpose of the assessment is to identify any listed species which may be affected by the activity and to determine whether a conference is required for proposed species. Informal consultations also include discussions between the Service and the Federal agency or the designated non-Federal representative designed to resolve potential conflicts between the Federal activity and listed species. Many of

these discussions eliminate the "may affect" situation, and thus negate the need for formal consultation.

This is substantiated by the decrease in the number of formal consultations and the increase in informal consultations in the past 3 years. In 1979, the ratio of informal consultations to formal consultations was 1585 to 980; in 1980, 2374 to 729; and in 1981, 3535 to 483.

The 1979 Amendments to the ESA added a new provision. If the Federal agency determines its activity is likely to jeopardize the continued existence of a proposed species or result in the destruction or adverse modification or proposed critical habitat, the agency shall informally confer with the Service. The Service will make recommendations to the agency to minimize or avoid the potential conflicts. The results of the conference will be documented.

Formal consultation is initiated by a Federal agency when it determines that a "may affect" situation exists. The Service examines the information provided by the agency along with information from experts on the species to determine if the activity is likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of critical habitat. Upon completion of this examination, a biological opinion will be rendered by the Service. The opinion will advise whether the activity will promote the conservation of the species and whether the activity is or is not likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of critical habitat. The biological opinion will include a summary of the information on which the opinion was based. If the biological opinion is a jeopardy opinion, reasonable and prudent alternatives that would avoid jeopardy and can be taken by the Federal agency must be included. In addition, any biological opinion may include recommendations that will further conserve Endangered or Threatened species. All Service activities follow the Section 7 consultation procedures.

The 1978 Amendments created the Endangered Species Committee. The Committee is designed to review a Federal agency's application for an exemption from a Section 7 jeopardy biological opinion, and determines whether or not to grant an exemption. To date, there have been only two activities that have gone through the exemption process, i.e. Tellico Dam and Grayrocks. In those two cases, an exemption was granted for the Grayrocks project, but denied for Tellico Dam. However, as you know, the denial of the Tellico Dam exemption was subsequently overridden by a later act of Congress, and the project has now been completed.

It is our policy to resolve these issues so that federally sponsored or permitted projects can proceed while still maintaining protection for threatened and endangered species. There have been several cases where we have had notable success. For instances, in the case of the White River Dam project in Utah, the Service, working with representatives of the BLM and the State of Utah, has developed specific recommendations that will ensure the conservation of the squawfish without hindering development of the project. We intend to continue to pursue this type of cooperative working relationship with Federal and State agencies and private developers.

Mr. BREAUX. Why don't we take our next witness, but first, I would announce for the convenience of everyone here we will take this panel and proceed to questions, and following the completion of the panel, the committee will recess for a lunch break and probably run at 2 p.m. for the second two panels for this afternoon.

So people may have an idea of where we are going at the time and everything. With that, we will hear from Mr. John Hall.

Mr. Hall, it's not Mr. Hall as I understand it, right?

STATEMENT OF ROBERT L. CARLTON, JR.

Mr. CARLTON. Mr. Chairman, members of the subcommittee, I am sorry Mr. Hall was not able to be with us this morning and I am taking his place. I am Bob Carlton, manager of wildlife and nontimber resources programs for NFPA.

Mr. BREAUX. Mr. Carlton.

Mr. CARLTON. I will briefly summarize our statement which is submitted for inclusion in the record.

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We believe that the Endangered Species Act, or something like it, is necessary if we are to prevent heedless and thoughtless destruction of our Nation's biological resources. We support that goal very strongly. However, we do believe the way the act has been implemented has led us to neglect the balance of preservation of species as a goal with other valid national goals such as national defense, economic growth, level of employment, et cetera.

We believe there are aspects of the current act that need correction, including such things as the need to redefine some of the definitions, a more careful consideration of the linkage between biological findings of fact and the degree of protection which is afforded species, and greater consideration of the costs that are involved in protecting species.

There are several important terms we believe need the attention of Congress in the way of definitions, among them such things as "critical habitat": what is to be included, how is the Service to interpret the congressional definition. The word "species": What do we mean by species, what do we intend to be covered? The same is true with respect to the terms "endangered" and "threatened species." We need to give more attention to what is meant by the definition of "taking."

With respect to the linking of biological findings of fact and decisionmaking, we can certainly go along with much that Mr. Bean mentioned earlier. We think there are two primary functions involved in the Endangered Species Act.

The first is determination of the status of a species and the habitat which it requires in order to continue in existence. The second function is deciding what level and what kinds of protection we are to afford these species. I would agree with much that Mr. Bean had to say on this, but I think it goes beyond where he stopped. I believe the linkage does involve such things as the prohibition of certain activities and certainly the proscriptions provided in section 7 of the act.

With respect to costs, we believe far too few people have come to realize that in a sense, there ain't no free lunch. The protection of species does have costs. Some of these costs, because they involve Federal lands and Federal agencies, are apportioned amongst all of the people of the United States. Other of these costs fall primarily on the private sector, on those who in one sense of the word are unfortunate enough to be harboring one or another endangered species. We believe attention must be given to how these costs, those which fall primarily on the private sector, are borne. If endangered and threatened species are of concern to all of us, then all of us should be involved in paying those costs.

Many people seem to feel the act is working well. We disagree. If it were working that well, there would not be this degree of controversy that we see every year, or every 3 years, when it comes up for reauthorization. We believe that this dissatisfaction and controversy is going to grow as more and more species are listed pursuant to the provisions of the act. It is necessary that we carefully examine the act, its implementation, and what it means. We at NFPA are prepared to work with the Members of this committee and other Members of Congress and their staffs in this goal of protecting our plant and animal resources. Thank you.

Mr. BREAU. Mr. Carlton, thank you.

[The statement of Mr. Hall follows:]

PREPARED STATEMENT OF JOHN F. HALL, NATIONAL FOREST PRODUCTS ASSOCIATION

Thank you for giving us this opportunity to present the National Forest Products Association's views on the Endangered Species Act and its implementation and our suggestions for its improvement.

NFPA, headquartered in Washington, D.C., is a federation of 31 forest industry associations in addition to direct company members. Through its membership it represents more than 2,500 companies throughout the United States and Canada engaged in timber growing and in the manufacture and distribution of forest products.

The Endangered Species Act was enacted as an effort to insure our nation's plant and animal resources would be protected from extinction. We support this goal. However, we believe that implementation of the Act has tended to neglect or unnecessarily override other important national goals, such as resource productivity, economic growth and higher levels of employment. Too little attention has been given to the process of balancing these several goals.

We agree with the concept that plants and animals should be protected from extinction that results from heedless acts of man. However, we are concerned with aspects of the current Act and its implementation and with the apportionment of the costs of protecting species and their habitats, especially as this applies to the private sector.

Areas of particular concern to us include: (1) definition and use of terms such as "critical habitat", "endangered species", "threatened species", "species", and "take"; (2) the linkage between biological findings of fact and decision-making; and (3) the uncompensated costs for protecting species and habitats borne by only a selected group of private persons.

Other concerns also are indicated and addressed in the attached "Suggested Changes in the Endangered Species Act of 1973, as amended".

A. Statutory Problems

1. Definitions - Several important terms should be redefined to clarify Congressional intent and to reduce confusion.

- a. Critical Habitat - As currently interpreted by the Fish and Wildlife Service, the term seems almost to cover the universe. However, when Congress first developed this definition, the emphasis was on discrete elements or sites within the habitat which required special management and protection. The definition should be reworded or report adopted to insure that implementation of the Act will be given this same emphasis.
- b. Species - At present, the term "species" is used to denote groups as varied as local populations which may be only a small part of a wider ranging species, to "full" species. This is confusing. The term should be given its biological meaning, or be dropped entirely, using the definitions of "endangered species" and "threatened species" to allow listing of subspecific taxa when appropriate.
- c. "Endangered Species" and "Threatened Species" - These definitions appear to be the logical places to provide for listing of subspecific taxa under appropriate conditions. Although many have complained about the listing of subspecies, varieties or populations, we believe the ability to list such taxa can provide a very necessary degree of flexibility if used properly. It is not necessary or wise to list at the specific level unless the entire species is endangered or threatened. However, listing below the specific level should be restricted to those instances where failure to list subspecific taxa would result in listing of the species over its entire range or in the extirpation of subspecific groups which are isolated from other elements of a species. These definitions should be changed to allow such subspecific listing under these circumstances.
- d. "Taking" - When Congress developed the Act in 1973, two major causes for extinction were recognized. The first was the removal or reduction to possession of animals from a population, that is, the killing or capturing of individuals. The second was elimination of populations through adverse modification or destruction of habitat. Although bills were considered which would have combined resolution of both causes, i.e., by defining habitat modification or destruction as a form of "taking", the final decision was to separate the approaches. Reduction to possession or removal of animals was to be resolved by outright prohibition of such activities.

Elimination of populations through habitat modification or destruction was to be resolved by authorizing purchases of threatened habitats. We are in substantial agreement with this approach. However, the definition of "take" should be changed to insure adherence to this concept by the implementing agencies. In addition we recommend changes in the language authorizing acquisition to insure that the relatively small amount of money available for purchasing habitats for listed species be used to acquire those designated critical habitats most seriously threatened with modification or destruction.

2. Linking of Biological Findings of Fact and Decision-Making - Interpretation and implementation of past and current language in Section 7 of the Act has led to much of the outcry for change. The perception, and hence generally the result, has been that the Act requires all actions in conflict with listed species or critical habitat be resolved totally in favor of the species or habitat. Whether the perception is correct or not is immaterial - decisions to do or not do are predicated by the perception.

We do not believe past or current language in Section 7 is necessary to protect endangered or threatened species from extinction. We have asked environmental groups how many and which species would have become extinct if the standard in Section 7 for federal action agencies were to safeguard listed species and their critical habitats to the extent practicable and consistent with the agencies' primary missions and mandates rather than the current standard which requires insurance that an agency action is not likely to jeopardize the species existence or critical habitat, without an answer.

A system be provided to assure that decision-makers have the necessary information on the effects of proposed actions on listed species, that the information be a part of the required process for selection among alternatives and that the decision-makers then be allowed to make decisions. As a part of this system we recommend the Secretary be given authority to delegate consultation to other agencies through counterpart regulations.

B. Apportionment of Costs

1. Uncompensated Costs

Often overlooked in discussions of protecting endangered and threatened species are the costs of such protection. Some of those costs can be quantified, others are difficult to assign. Often unaccounted for are those costs associated with unconscious decisions not to take an action or to postpone or shift an action because of possible complications rising from listed species or habitats. There is also the chilling effect which results in conscious decisions to alter or fail to undertake activities because of possible complications.

* Other costs, including opportunity costs, are easier to quantify. Companies from our industry can offer several examples.

1. Bald Eagle - One company has 80 nests within 41 nest sites on its properties in two states. Size of sites range from 3 to 40 acres of mature to old-growth timber. The total is 900 acres of unharvestable timber with a minimum value of \$9 million. Other costs include the value of each year's added growth (which may not be realized in stagnant or declining old-growth but would be in younger vigorous managed stands) and management and operational costs, including modified logging in adjacent blocks and scheduling of harvests to coordinate with the species' biological patterns.
2. Red Cockaded Woodpecker - One company has 22 colonies for which it has set aside 155 acres of timber which can be valued at \$115,000 in current appraised values. The other costs cited above pertain in this case also. Another company has modeled costs and returns on a management scheme which would protect the woodpecker while also producing timber. The costs of the model management plan as compared to normal timber management ranged from \$2,862 to \$4,989 per bird per year. Costs per acre per year ranged from \$86 to \$150 depending on site quality.

The sources of these specific cost figures are attached.

Other costs include those due to delay in implementing activities because of alleged endangered species concerns. For example, the appeal of the decision to build the Jersey Jack Road on the Nezperce National Forest is based in part on alleged violations of the Act. Delay so far has affected a \$1.2 million appropriation for construction, with its associated employment.

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and other economic benefits. The environmental assessment and notice of the decision for the Soda-Point Four Mile area of the Nezperce National Forest has been appealed, again on the assumption there may be endangered species in the area. An indication of the impact of such delays is given by the fact that mills in the area employ 500-600 loggers and millworkers and indirectly provide employment for another 1,000-1,200 people.

These data indicate that many of the costs of protecting listed species and their habitats are inequitably distributed. Since Congress has found that the continued existence of such species is of paramount concern and value to all of the people of the United States, the costs ought to be borne by all the people. To achieve a better balance in the distribution of costs, we suggest the development of a program for compensating losses and costs.

Many people feel the Act does not need to be amended, that it is working well. We disagree. The continuing controversy is indicative of dissatisfaction with the way we have been trying to achieve a laudable goal - preventing needless losses of our plant and animal heritage. The controversy and dissatisfaction will grow as more species and habitats are listed unless measures are taken to resolve the widespread concerns felt over the way protection of such species is affecting our ability to provide all of the things which contribute to a high quality of life.

Our staff is prepared to work with you and with other groups in efforts to reach the goal of protecting our plant and animal resources with minimum disruption to our ability to achieve all of the other goals we have set for ourselves as a nation.

Suggested Changes in The Endangered Species Act of 1973, as Amended

1. Section 2(a)(1) is amended by striking in its entirety and substituting the following:

"2(a)(1) Various species of animals and plants in the United States have become extinct or been in danger of or threatened with extinction as a result of natural changes in the environment as well as those changes which result from economic growth and development;"

Comment: No matter what the cause, a species is in danger of or threatened with extinction when its numbers reach a certain lower level. There is no reason for separating § 2(a)(1) and (2).

2. Section 2(a)(2) is amended by deletion.

Comment: See 1 above.

3. Section 2(a) is further amended by renumbering 2(a)(3) - 2(a)(5) as 2(a)(2) - 2(a)(4).

Comment: Technical and conforming.

4. Section 2(b) is amended by striking in its entirety and substituting the following:

"2(b) Purposes - The purposes of this Act are to provide a program for the conservation of such endangered species and threatened species, including conservation of the ecosystems upon which these species depend, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section."

Comment: This wording emphasizes that what is needed is a several-pronged program, one part of which is protection of ecosystems.

5. The first clause of section 3 is amended by inserting after the word "Act, the following:

"and any regulations to implement this Act"

Comment: Does away with the tendency by some agencies to restate, or in some cases reword or expand, statutory definitions in implementing regulations.

6. Section 3(1) is amended by deletion.

Comment: No longer germane (see 39 below).

7. Section 3(3) is amended by striking "all" in the first sentence and substituting "prudent and feasible"; and by striking ", in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include"

Comment: It is highly improbable that "all" methods and procedures would ever be considered, let alone used; "prudent and feasible" is a more realistic standard; and there is no logical reason to separate regulated harvest from other conservation techniques for such special treatment.

8. 3(5)(A)(1) is amended by striking "areas" and substituting "sites"; and in clause (II) by striking "may"

Comment: The emphasis should be on specific, readily identified, discrete elements, not on general locales. Clause (II) was intended to one part of a two-part test for determining whether or not a specific site, with its associated physical and biological features is to be designated as critical habitat, therefore the use of the discretionary "may" is inappropriate.

9. Section 3(5)(A)(11) is amended by striking "for the conservation of the species" and substituting "if the species' numbers are to increase to such levels that the species is no longer endangered or threatened"

Comment: The emphasis should be on recovery, the recommended language reflects emphasis.

10. Section 3(6) is amended by striking all after "range" and by adding the following; "the Secretary may consider a lower taxon an endangered species for the purposes of the Act if it can be shown that the entire species over its entire range would otherwise be listed but that only a portion of it needs the protection afforded by this Act or if the failure to list an isolated lower taxon would result in its extirpation without the probability of re-invasion by other elements of the species."

Comment: The current language is meaningless since by the time an insect species

reached such depleted numbers as to be considered threatened with or in danger of extinction, it would no longer be an overwhelming and over-riding risk to man. The suggested language would permit listing of taxa below the level of the species if there is a high degree of probability that something less than the entire species does not require the kind of protection afforded by the Act. It would prevent the wholesale listing of subspecific entities absent a showing of probable listing at the species level or a showing of extirpation of subspecies without probability of re-invasion by the species.

11. Section 3(8) is amended by striking ", including without...invertebrate,"

Comment: The independent clause is all-inclusive, the remaining language is superfluous.

12. Section 3(11) is amended by deleting present language and substituting:

"the term 'introduced population' means any population whether derived from captive-bred or translocated wild individuals, of a species listed under the Act, introduced into an area for the purpose of extending the species' range beyond those specific areas inhabited at the time of listing. Such introduction will be taken to mean the species did not inhabit the area of introduction at the time of listing. Such populations shall not be listed as endangered or threatened."

Comment: Present language no longer germane (see 39 below). At present there is reluctance on the part of land managers to allow release of endangered or threatened species on lands for which they are responsible because of the possible restrictions on practices which would be permitted subsequent to a release. The proposed definition would help alleviate such concerns.

13. Section 3(12) is amended by deletion.

Comment: No longer germane (see 39 below)

14. Section 3(16) is amended by striking in its entirety and substituting the following:

"3(16) the term "species" means a group of physically similar organisms capable of interbreeding but generally incapable of producing fertile offspring through breeding with organisms outside this group."

Comment: The current definition is biologically meaningless. If there is need to provide for listing at taxonomic levels below the species, this could be done by appropriate amendment of the definitions for "endangered species" and "threatened species."

15. Section 3(17) is amended by deletion.

Comment: This definition is superfluous (see 18 below)

16. Section 3(19) is amended by striking in its entirety and substituting the following:

"3(19) the term "take" means pursue, hunt, shoot, wound, kill, trap, or collect, or to attempt to engage in any such conduct, for the purpose of removing an animal or plant or reducing it to possession."

Comment: To most biologists, the term "take" as used in connection with wildlife, means to remove or reduce to possession. The term "harrass" does not belong in the definition; if harassment is to be prohibited, it should be considered separately. The term "harm", as it is defined at 50 CFR 17.3, is covered by use of the words "wound" and "kill".

The word "plant" is included since it is possible to remove or reduce plants to possession. It is not intended that the taking of plants be a prohibited act under the Act. However, federal agencies, under the requirements of section 7 of the Act, may need to prohibit taking of plants pursuant to a federal action.

17. Section 3(20) is amended by inserting before the "." the following: "; the Secretary may consider a lower taxon a

threatened species for the purposes of this Act if it can be shown that the entire species over its entire range would otherwise be listed but that only a portion of it needs the protection afforded by this Act or if the failure to list an isolated lower taxon would result in its being threatened with extirpation without the probability of re-invasion by other elements of the species"

Comment: See comment at 10 above.

18. Section 3(21) is amended by striking in its entirety and substituting the following:

"3(21) the term "United States," when used in a geographical context, includes all states, possessions and territories."

Comment: Does away with any need to enumerate and makes 3(17) superfluous.

19. Section 3 is further amended by renumbering as follows: 3(2) as 3(1); 3(10) as 3(9); 3(13) - 3(16) as 3(10) - 3(13); 3(18) - 3(21) as 3(14) - 3(19) and substitution as required in the remainder of the Act.

Comment: Technical and conforming.

20. Section 4(a)(1)(1) is amended by inserting after the word "range", the following: "due to human activities"

Comment: Places the emphasis on man's activities rather than attempting to cover natural agencies which might have such effects.

21. Section 4(a)(1)(3) is amended by substituting a "," for the word "or" and after the word "predation, adding the following: "or other natural factors"

Comment: Places all natural factors affecting species in the same subsection.

22. Section 4(a)(1)(5) is amended by striking in its entirety and substituting the following: "4(a)(1)(5) other manmade factors."

Comment: Natural factors considered at section 4(a)(1)(3).

23. Section 4(a)(2)(A) is amended by inserting, after 4(a)(2)(B)(ii), current sections 4(a)(2)(B)(i) and 4(a)(2)(B)(ii) as sections 4(a)(2)(A)(iii) and 4(a)(2)(A)(iv);

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and by deleting "list such... section" and substituting "implement such action"

Comment: Technical.

24. Section 4(a)(2)(B) is amended by deletion.

Comment: Technical (see 23 above)

25. Section 4(a)(2)(C) is amended by renumbering as "4(a)(2)(B).

Comment: Technical and conforming.

26. Section 4(b)(2) is amended by inserting after the first "any" the word "foreign"; and after "protection", inserting "or management."

Comment: Technical.

27. Section 4(d) is amended by adding after "... such species" and before "." of first sentence, the phrase "with an emphasis on those which encourage research on interactions of management and population effects."

Comment: Emphasizes the importance of and need for management-oriented research which will lead to recovery of listed species.

28. Section 4(e) is amended by inserting after the word "Act", the clause "provided that all procedures in subsections (b), and (f) of this section have been followed, just as though the species were to be listed as threatened or endangered"

Comment: Insures that procedural requirements necessary for listing endangered and threatened species are followed for these species as well.

29. Section 4(e)(A) is amended by striking "at the point in question,"; after first "that", inserting "at designated ports or within the areas where the listed and unlisted species coexist,"; after the ";", adding "and"

Comment: Clearly establishes those situations where similarity of appearance could be a problem.

30. Section 4(e)(B) is amended by striking the word "and"

Comment: Technical.

31. Section 4(e)(C) is amended by deletion.

Comment: Superfluous

32. Section 4(f)(2)(B)(i)(II) is amended by striking in its entirety and substituting the following:

"4(f)(2)(B)(i)(II) "A general notice of the regulation, including a summary of the text and a map of any proposed critical habitat, in a newspaper of general circulation in or adjacent to the occupied range of the species or the proposed critical habitat;"

Comment: Provides better public notice for regulations not involving critical habitat.

33. Section 5(a) is amended by striking in its entirety and substituting the following:

"5(a) Program. - The Secretary, and the Secretary of Agriculture with respect to the National Forest System, shall establish and implement a program to conserve those endangered species and threatened species listed pursuant to section 4 or this Act. To carry out such a program, the appropriate Secretary -

(1) shall utilize the land acquisition authority under the Fish and Wildlife Coordination Act, as amended, and the Migratory Bird Conservation Act, as appropriate, in acquiring designated critical habitats;

(2) is authorized to accept donations, gifts or other voluntary offerings of lands, waters, or interest therein;

(3) is authorized to acquire by purchase from willing sellers, lands, waters or interests therein, which are within designated critical habitats, and such authority shall be in addition to any other land acquisition authority vested in him."

Comment: Places emphasis on acquisition of critical habitat which, given relative scarcity of funds for acquisition, should be the first priority in a habitat acquisition program for listed species.

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34. The first sentence of Section 6(b) is amended by inserting "federal" between "any" and "area."

Comment: States do not need to enter a management agreement to manage non-federal lands.

35. Section 6(c) is amended by striking in its entirety and substituting the following:

"6(c)(1) In furtherance of the purposes of this Act, the Secretary is authorized to enter into a cooperative agreement with any state whose program for the conservation of endangered species and threatened species of fish, wildlife and plants meet the standards in (A)-(C) of this section. Within 120 days after the Secretary receives a certified copy of such a state program, he shall determine if it meets the standards below. If he determines the program meets these standards, he shall enter into a cooperative agreement with the state for the purpose of assisting in implementation of the state program. A state program will be deemed to meet the standards if --

(A) Authority rests in a state agency to conserve species determined by the agency or the Secretary to be endangered or threatened;

(B) The state agency has a program for conserving those species which the agency or the Secretary have determined to be endangered or threatened and which the agency and the Secretary agree are most urgently in need of such a program;

(C) The state agency is authorized to undertake those activities associated with scientific resources management.

If the Secretary determines the program does not meet these standards, he shall notify the state in writing of this determination, including the reasons for reaching such determination.

6(c)(2) The applicability of prohibitions set forth in or authorized pursuant to section 4(d) or section 9(a)(1) or section 9(a)(2) shall not apply to those resident species covered by such a state program."

Comment: Streamlines the cumbersome procedures in current regulations which unnecessarily separate wildlife and plants.

36. Section 6(d)(1)(D) is amended by striking in its entirety and substituting the following:

"6(d)(1)(D) The potential for and the desirability and economic feasibility of restoring endangered species and threatened species within a state; and"

Comment: There will be species whose recovery is not desired at all places where they might be restored.

37. Section 6(d)(2)(C) is amended by striking in its entirety and substituting the following:

"6(d)(2)(C) The estimated direct costs and the specific anticipated economic impacts of these actions; and"

Comment: Direct and indirect costs and impacts should be clearly separated.

38. Amend Section 6(g) by deletion.

Comment: No longer germane.

39. Section 7 is amended by striking in its entirety and substituting the following:

"7(a) Federal Agency Programs. - The Secretary shall, when appropriate, utilize programs administered by him in furtherance of the purposes of this Act. All other Federal agencies shall, to the extent practicable and consistent with their primary missions and mandates, integrate conservation of species listed pursuant to section 4 of this Act with their programs.

7(b) Federal Agency Actions. - Prior to the conduct of any action to be funded or carried out by a federal agency, hereinafter in this section referred to as action agency, the action agency shall prepare a report to Congress on the probable effects, if any, of the action on any species listed, or proposed to be listed, pursuant to section 4 of this Act, provided that the issuing of permits or licenses, making of grants, loans or loan guarantees and providing financial or technical assistance shall not be considered federal actions for the purposes of this Act. If a significant effect, as determined by the Secretary, is anticipated, the report to Congress shall include a written statement setting forth the Secretary's opinion which (i) details how the action is expected to affect listed species and

their critical habitats, and (ii) presents reasonable and prudent alternatives the agency can take which will avoid or lessen any negative effects of the proposed action on such species and habitats. The agency proposing the action shall indicate in the report the reasons for accepting or rejecting any proposed alternative, including the original action. The Secretary's opinion shall be published in the Federal Register within 10 days after its transmission to the action agency.

- 7(c) Biological Assessment. - To facilitate compliance with subsection (b), the action agency shall request the Secretary to advise if any listed species, species proposed to be listed, or critical habitats may be present in the area of the action. If the Secretary advises that such species or habitats may be present, the action agency shall conduct a biological assessment to determine the presence of such species or habitats. The assessment shall be completed within 180 days of initiation.

- 7(d) Consultation. - If the biological assessment indicates the presence of listed species, species proposed to be listed, or critical habitats in the area of the proposed action, the action agency shall notify the Secretary of such presence and of the nature of the proposed action. If the Secretary decides the anticipated effects of the action on such species and habitats are significant, the action agency shall consult with him. The form of and information to be a part of such consultation shall be determined by agreement between the Secretary and the action agency. Consultation shall result in (i) an opinion by the Secretary as required in subsection (b), and (ii) any additional information the action agency may need in reaching decisions to accept or reject alternatives. Consultation shall be concluded within 180 days after initiation. The Secretary shall delegate authority for consultation to other federal agencies upon his approval of standards and procedures developed by individual agencies to insure compliance with the provisions of this Act. Delegation shall be accomplished through counterpart regulations.

- 7(e)(1) Jeopardy. - An action which is likely to (i) jeopardize the continued existence of a species listed pursuant to section 4 of this Act or (ii) result in adverse modification or destruction of designated critical habitat, may be conducted, provided, the report required in subsection (b) of this section

has been received by Congress. (2) Incidental or in advertent takings of listed species pursuant to an action meeting the requirements of subsection (b) of this section shall not be prohibited takings for purposes of this Act.

Comment: This language a) removes the objection that a biological finding of fact (endangerment) would be the sole, or principal, factor halting federal actions, b) puts the decision-making where it belongs - initially with the agency and ultimately with Congress and c) provides a procedure whereby Congress and agencies are assured of having necessary biological information prior to taking final action.

40. Section 8(a) is amended by substituting "may" for "shall" in the second sentence.

Comment: Technical - to conform to first sentence.

41. Section 8A is amended by renumbering as 8(e), and renumbering subsections, paragraphs and clauses as necessary to conform.

Comment: Technical

42. Section 8A(d)(7) - current numbering - is amended by striking in its entirety and substituting the following:

"8(e)(4)(G) In any case in which the Scientific Authority decides not to accept a recommendation made by the Commission under paragraph (E), whether for environmental, economic, political or other reasons, the Scientific Authority shall provide the Commission a written explanation of the reasons for that Decision."

Comment: Inasmuch as the Commission's recommendation is not published, why publish the Scientific Authority's explanation for not accepting it.

43. Section 8A(d)(8)(A) - current numbering - is amended by striking in its entirety and substituting the following:

"8(e)(4)(H)(1) The Chairman of the Commission, with the agreement of a majority of the Commission, shall appoint a member of his agency to serve, without additional compensation, as Executive Secretary for the Commission. The Executive

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Secretary serves as such at the pleasure of the Chairman and Commission and shall carry out such functions and duties as may be prescribed by the Commission."

Comment: This would provide for control of the Secretariat by the Commission as well as reduce total costs of administration.

44. Section 9(a)(1) is amended by striking "6(g)(2)" and inserting "6(c)(2)"

Comment: Technical and conforming.

45. Section 9(a)(2) is amended by striking "6(g)(2)" and inserting "6(c)(2)"

Comment: Technical and conforming

46. Section 9(b)(1) is amended by striking all after ";" and insert "."

Comment: Unnecessary constraint which has operated to the detriment of such species as Psitticines.

It is the responsibility of the accuser to prove that the accused has committed a prohibited act, not that of the accused to prove he didn't.

47. Section 9(c)(1) is amended by striking "." and adding ", Provided, that possession of specimens acquired before ratification of the convention or before placement on an appropriate Appendix to the Convention, whichever is later, is not prohibited."

Comment: Grandfather Clause.

48. Section 9(c)(2) is amended by deletion.

Comment: Superfluous.

49. Section 10(a) is amended by adding at the end of thereof, "The Secretary shall issue any necessary permits, for research on management for enhancement of species and critical habitats listed pursuant to this Act, provided such a permit would not likely result in extinction of the listed species."

Comment: This emphasizes the need for management-oriented research.

50. Section 10(b)(1) is amended by striking "notice of consideration of" and inserting "a proposal to list" whenever the former appears.

Comment: The only procedural steps recognized for purposes of a rulemaking, including a regulation listing a species under the Act, are proposed and final rulemakings. The stricken term is too vague to serve as a procedural signpost.

51. Section 10 (b)(2) is amended by striking "notice of consideration of" and inserting "a proposal to list" whenever the former appears.

Comment: See 50 above

52. Section 11 (a)(1) is amended by striking ", any person engaged in business as an importer or exporter of fish, wildlife or plants who violates," wherever it appears.

Comments: There is no substantive reason for singling out this class -which is undefined in the statute and hence subject to varying interpretation as to who is included - for purposes of holding to a higher standard of liability.

53. Section 11(b)(1) is amended by striking "knowingly" and inserting "willfully" wherever it appears.

Comment: There should be higher standards of liability for a criminal violation than a civil one, yet such is not presently the case.

54. Section 11(g)(4) is amended, after the parenthetical insertion, by striking "any" and inserting "the prevailing"

Comment: As currently written, the court could award costs to the losing party.

55. Section 12 is amended by striking in its entirety and substituting the following:

"Compensation for Financial Losses"

"12(a) The Secretary is authorized to compensate persons for financial loss when he determines such persons have suffered financial losses directly caused by requirements or prohibi-

tions of this Act or of regulations promulgated pursuant to authority provided by this Act when such requirements or prohibitions create conditions whereby a person (i) must manage lands owned by him in a manner which eliminates financial gain which would otherwise accrue if such land were managed in the absence of such requirements or prohibitions or (ii) is prevented from taking an animal or plant which is causing him economic damage.

(b) The Secretary shall issue such regulations as may be necessary to implement this section, including those which (i) prescribe the manner and form for applying for compensation; and (ii) describe the evidence required to substantiate the claim that loss was due to conditions described in subsection (a) of this section.

(c) The Secretary shall make the determinations required by this section within 60 days after receipt of an application filed in accordance with subsection (b)(i) of this section.

(d) The amount of compensation paid, pursuant to this section shall be equal to the economic gain foregone or loss sustained.

(e) Compensation shall not be paid under this section unless application for such compensation is made (i) within one year after final regulations are issued pursuant to subsection (b)(1) of this section, (ii) within one year after final regulations are issued by the Secretary which establish requirements or prohibitions alleged to cause losses or (iii) within one year after being prohibited, pursuant to the Act, from undertaking an action whose prohibition is alleged to cause losses.

(f) The Secretary's determination shall be an agency final action for purposes of judicial review.

(g) Failure to compensate a person who the Secretary has determined has suffered economic loss under the terms of this section within one year of such determination shall be considered permission for that person to conduct the action causing economic loss without prosecution, injunction or penalty otherwise provided in this Act.

(h) There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this section.

Comment: Current language no longer germane. This new section would establish a procedure whereby a person who is injured because of requirements or prohibitions that might be construed as takings of private property may be compensated for losses.

June 26, 1981

Mr. Robert L. Carlton
National Forest Products Association
1612 Massachusetts Avenue, N.W.
Washington, D.C. 20036

Dear Bob:

In reference to your June 8 memo on draft suggestions for changes to the Endangered Species Act and the Eagle Protection Act, I have some comments.

Generally, I have no problems with the changes as proposed. Particularly important is the suggested change in the "harass" clause 10.12. I suspect there may be some enforcement problems involved in determining "intentional" or "unintentional" harassment.

Revisions regarding critical habitat designation (424.02 and 424.12f) and compensation for financial losses (53.12) are good and address some of the problems we have to deal with in this part of the country.

Most people view the Endangered Species Act as applying only to federal lands. However, the ESA directly affects private lands to the extent that we depend upon access across federal lands to intermingled inholdings.

To date, access has not been denied to Company lands solely because of endangered species. However, the process has been delayed considerably because:

- 1) We are forced to develop long range resource management plans for areas supporting threatened and endangered species on short notice without the benefit of accurate wildlife or timber management data. If these data become available at a later date and indicate that the plan must be revised, extensive inter-agency coordination involving yet another Section 7 consultation must be attempted.

- 2) Situations involving Company access requests across federal lands supporting threatened or endangered species are commonly referred to a third agency (USFWS) for Section 7 consultation. Usually a "jeopardy" opinion is rendered and, because the USFWS is somewhat far removed from the area, suggested alternatives are often neither prudent nor reasonable.

These concerns may not be possible to address in the proposed revisions, but you may keep them in mind.

Sincerely,

Lorin L. Hicks
Wildlife Biologist

LLH/mc

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200 ACRE, 75 YEAR IMPERFECT ROTATION FOR RED-COCKADED WOODPECKERS

ITEM	YEAR	HARVEST AGE	CDS/ACRE		TOTAL CORDS HARVESTED	TOTAL HARVEST VALUE		REG. COST	ANNUAL PMNT. TAX COST	NET CASH FLOW	BALANCE AND* INTEREST	CURRENT BALANCE	ACRES REG.	TAXES \$2.50	MGMT. COSTS \$4.00	REG. COST \$100
			ACRES	TO HARVEST		VALUE CDS/ACRE	VALUE									
CC & P A T BCD	0	60-80	50	27.5	1,375	70 ST	96,250	- 5,000	- 1,300	106,825 *			50	6.50		100
			150	2.5	375	45 T	16,875									
T A	15	15	50	3.0	150	42 PW	6,237	0 - 30,380	- 24,143	222,082	197,939					
CC H	20	80-100	50	31.5	1,575	186 ST	292,850	- 9,050	- 11,740	272,160	252,625	524,785	50		181	
T ABG	35	35	50	20.0	1,000	248 T	248,000									
		95-115	50	7.0	350	248 T	86,800									
		15	50	3.0	150	110 PW	16,500	0 - 54,870	296,430	1,090,991	1,387,421					
CC C	40	100 120	50	33.0	1,650	493 ST	813,450	-16,300	- 21,203	775,947	1,770,740	2,546,687	50		326	
T ABC	55	TA 55	50	20.0	1,000	1,024 ST	1,024,000									
		TB 35	50	20.0	1,000	654 T	654,000									
		TC 15	50	3.0	150	293 PW	43,950	0 - 99,102	1,622,848	5,294,379	6,917,227					
CC (P) D	60	120 140	30	30.0	900	1,308 ST	1,177,200	-17,670	- 38,295	1,121,235	8,828,329	9,949,564	30		589	
CC (P) D	75	135 155	20	32.0	640	2,718 ST	1,739,520	-45,900	-178,969	8,398,219	20,684,429	28,992,643	20 30		918	
CC (P) A T (P) D T BC		75	30	27.7	831	2,718 ST	2,258,658									
		15	30	3.0	90	777 PW	69,930									
		TB 55	50	20.0	1,000	2,718 ST	4,718,000									
		TC 35	50	20.0	1,000	1,747 T	1,747,000									

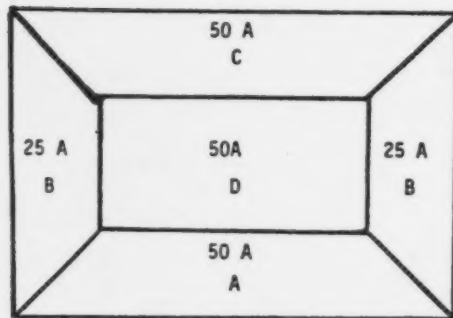
200 ACRES, (3), 25 YEAR ROTATIONS

CC P A11	0	60-80	200	27.5	5,500	70 ST	385,000	-20,000	- 1,300	363,700	363,700	363,700	6.50	100
CC P A11	25	25	200	45.9	9,180	110 PM	1,009,800	-41,800	- 68,048	899,952	1,231,617	2,131,569		209
CC P A11	50	25	200	45.9	9,180	373 PM	3,424,140	-87,600	-142,477	3,194,063	7,218,250	10,912,313		438
CC P A11	75	25	200	45.9	9,180	1,262 PM	11,585,160	-183,600	-298,315	11,103,245	35,259,788	46,363,033	(3) 25-yr. rotation	
												25,232,648	(1) 75-yr. imp. rotation -	
												17,370,385	Difference	

CC = Clear Cut
P = Plant
(P) = Part
T = Thinn
A = Stand designation
ST = Saw Timber
PU = Pulp Wood

$$\begin{aligned} 17,370,385 &= X \left(\frac{(1.05)^{75} - 1}{.05} \right) \\ &= X \left(\frac{38.83 - 1}{.05} \right) \\ &= 756.65X \\ \$22,957 &= X \\ \$115/\text{AC/YR} \end{aligned}$$

FIGURE 1
200 Acre Loblolly Pine
60-80 yr., 60 ft²/A, S. Q. 60



27.5 C/A

FIGURE 2
MANAGEMENT SCHEDULE FOR
RED-COCKADED WOODPECKER TIMBER ROTATION

YEAR	STAND AGE & TREATMENT			
	A	B	C	D
0	CC - P 60 - 80	T 60 - 80	T 60 - 80	T 60 - 80
15	T 15	-	-	-
20	-	CC - P 80 - 100	-	-
35	T 35	T 15	-	T 95 - 115
40	-	-	CC - P 100 - 120	-
55	T 55	T 35	T 15	-
60	-	-	-	CC - P 120 - 140 (P) 20A
75	CC - P (P) 30A 75	T 55	T 35	CC - P 135 - 155 (P) 20A

CC - Clearcut
P - Plant
(P) - Part
T - Thinn
35 - Age

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THE ECONOMICS OF RED-COCKADED WOODPECKER MANAGEMENT

GEORGE A. GEHRKEN, Union Camp Corporation, Savannah, Georgia 31402
Non-Game & Endangered Wildlife Symposium
Athens, Georgia
August 13 & 14, 1981

Abstract: The management of two hundred acres of site quality 60, 60-80 year-old loblolly pine, 60 sq/ft. (5.7 M^2) basal area per acre, is projected for a 75-year imperfect rotation for Red-cockaded Woodpeckers. The same stand is managed for 75 years in three 25-year rotations. (The long rotation yields \$115.00 less per acre per year). (\$284. hectare//year).

- To assist persons and organizations interested in Red-cockaded woodpecker (*Picoides borealis*) management, this information is being presented. Many articles have been written on the management of this unique woodpecker. However, information is lacking in the literature concerning the cost of managing a timber stand for this bird. This endangered species can survive only where long rotation pine forest management is practiced. The paper will compare the income generated from the required long rotation with the income expected from even-age short rotation forest management.

The 75-year imperfect rotation used is based upon the management suggestions of the National Recovery Team for the Red-cockaded Woodpecker, Hooper, Robinson and Jackson (1980) and USDA Forest Service Wildlife Management Handbook (1978 Amended). This rotation for the Red-cockaded Woodpecker is designed to produce the maximum income while still providing adequate habitat for the bird.

I wish to acknowledge the assistance and council of J. G. Hamner, H. L. Holbrook, C. T. Johnson, and C. D. Roberts in the preparation of this paper. Without their help, the paper would have been an impossibility.

To compare the income produced by managing pine timberland for Red-cockaded Woodpeckers and short rotation forest management, the following assumptions are made:

1. A colony of woodpeckers is living on a 200-acre (80.9-hectare) upland tract of 60-80 year old loblolly pine (*Pinus taeda*). The site quality of this tract is 60 (at 25 years), the basal area is 60 sq. ft. per acre (14.1 Sq. M. per hectare).
2. By the use of a flight corridor system and the schematic diagram (Fig. 1), the foraging area, recruitment stand, and colony site can be connected throughout the entire rotation.
3. The stumpage price begins at \$75 a cord (20.60 M^3) sawtimber, \$45 a cord (12.41 M^3) chipping saw material and \$20 a cord (5.5 M^3) for pulpwood. These prices will increase 5% per year.
4. The taxes will begin at \$2.50 an acre/year (\$6.18 a hectare/year) and management costs will be \$4.00 an acre/year (\$9.88 a hectare/year). Both will increase 3% per year.
5. All income will be invested at 5% interest compounded annually.
6. The timber stands will grow at 1.8 cords/acre ($16.1 \text{ M}^3/\text{hectare}$) 1-25 years, 750 stems/acre, and 1.5 cords/acre ($13.4 \text{ M}^3/\text{hectare}$, 1-35 years 500 stems/acre) as in Smalley and Bailey (1974). Subsequent growth rates are set at .5 cords/acre ($4.5 \text{ M}^3/\text{hectare}$) 35-60 years; and .2 cords/acre ($1.8 \text{ M}^3/\text{hectare}$) per year for 60 years and older.
7. The initial price for wood clear cut from the mature stands will be \$70.00/cord because there will be a small amount of pulpwood in tops and odd trees. The initial price for the light thinnings, 2.5 cords/acre in the mature stand, will be \$45.00/cord. The price for stumpage in the small 15-year-old pines will be \$20/cord. The initial price for heavy thinnings (20 cd/acre) in the 35-year-old stands will be \$45/cd. The heavy thinnings 55 years and older will be \$70/cord. The initial cost of regenerating the timberland will be \$100 acre (\$247.10 hectare) and increasing 3% per year.

The presence of the colony is assumed to be in stand D (Fig. 1) and that stand will be used for the recruitment area until stand A reaches 60 years of age.

The forest management plan (Fig. 2) consists of clear cutting A, and thinning B, C, & D at year 0; then site preparing and planting A during that year with 500 stems/acre. During the 15th year a thinning of stand A, 3 cords/acre is made. During the 20th year stand B is clear cut and planted. During the 35th year of the rotation, the thinning of stands A, B, and D is in order. Stand C is clear cut and planted in the 40th year. During year 55, stands A, B, and C are thinned. During the 60th year, thirty acres of stand D is clear cut and planted; the recruitment stand is moved from D to A. The next harvest is in year 75 when the old colony stand D of 20 acres will be cut along with 30 acres of stand A. Stands B and C will be thinned at this time. Care must be taken to connect the colony site with corridors to B and D.

The management plan for the short rotation includes clear cutting the entire tract, preparing the site and planting 750 stems of loblolly pine per acre. The growth of 1.8 cords/acre is projected to be one-half pulpwood and half chipping saw or \$32.50/cord and 45.9 cords/acre.⁽¹⁾ This rotation is completed three times during the 75 years.

Selling the timber and investing the income for the 75-year rotation yields \$28,992,648. This entire area is regenerated and still supporting a colony of Red-cockaded woodpeckers. For detailed calculations, see Appendix 1.

The short rotation yielded \$46,363,033 or \$17,370,385 more.

To subsidize the long rotation sufficiently to equal the short rotation income would require an investment of \$22,957 a year at 5% interest or \$115.00 per acre annually. (\$284. hectare/year)

(1) All peeled cubic volumes from Smalley and Bailey are converted to standard cords by dividing by 75 ft³/cord.

It is difficult to visualize that it costs \$115 per acre or about \$3,826 per bird annually to manage for Red-cockaded Woodpeckers. The primary reason for this high cost is the \$1,925 tied up in an acre of mature timber. The annual income from this amount of money at five percent interest is \$96.25. The secondary reason for this cost is that an old stand sixty years old and older grows at approximately 0.2 cords per acre per year (allowing for expected mortality) while a young stand grows at the rate of 1.5 to 1.8 cords/acre per year. This paper does not recommend long or short rotations. The objectives of the timberland owner generally dictate the forest management practice utilized.

Literature cited

- Hooper, R. G., A. F. Robinson, Jr. and J. A. Jackson, 1980. The red-cockaded woodpecker: Notes on life history and management, U.S.D.A., Forest Service, Atlanta, GA. 8 pp.
- Snalley, G. W. and R. L. Failey, 1974. Yield tables and stand structure for loblolly pine plantations in Tennessee, Alabama, and Georgia highlands, U.S.D.A. Forest Service Experiment Station. New Orleans, LA. 81 pp.
- U.S.D.A. Forest Service, 1978 AMEND. Wildlife habitat management handbook, Atlanta, GA. 189 pp.

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APPENDIX 1

200 ACRE, 75 YEAR IMPERFECT ROTATION FOR RED-COCKADED WOODPECKERS

SITE QUALITY 50

ITEM	YEAR	HARVEST AGE	ACRES	CDS/ACRE TO HARVEST	TOTAL CORDS HARVESTED	VALUE CDS.	TOTAL HARVEST VALUE	REG. COST	ANNUAL MGMT. TAX COST	NET CASH FLOW	BALANCE AND INTEREST	CURRENT BALANCE	ACRES TAXES REG.	MGMT. COSTS \$2.50	REG. COST \$4.00	\$ \$100
CC & P A	0	60-80	50	22.5	1,125	70 ST	78,715	- 5,000	- 1,300	85,915	51	85,915	50	6.50	100	
T BCD			150	2.0	300	45 T	13,500									
T A	15	15	50	2.0	100	42 PW	4,200	0 - 30,380	- 26,180	178,611	152,431					
CC B	20	80-100	50	23.7	1,185	106 ST	220,410	- 9,050	- 11,740	199,620	194,545	394,165	50	181		
T ABD	35	35	50	10.0	500	248 T	124,000									
		95-115	50	5.6	280	248 T	69,490									
		15	50	2.0	100	110 PW	11,000	0 - 54,870	149,570	819,441	969,011					
CC C	40	100	50	26.9	1,345	493 ST	663,085	-16,300	- 21,203	625,582	1,236,731	1,062,313	50	326		
		120														
T ABC	55	TA 55	50	10.0	500	1,024 ST	512,000									
		TB 35	50	10.0	500	654 T	327,000									
		TC 15	50	2.0	100	293 PW	29,300	0 - 99,102	769,198	3,871,614	4,640,812					
CC (P) D	60	120	30	26.5	795	1,308 ST	1,039,860	-17,670	- 38,295	983,895	5,922,993	6,906,878	30	589		
		140														
CC (P) D	75	135	20	28.9	578	2,718 ST	1,571,004	-45,900	-178,989	5,753,426	14,358,903	20,112,329	20	918		
		155														
CC (P) A		75	30	26.1	783	2,718 ST	2,126,194									
T (P) D		15	30	2.0	60	777 PW	46,620									
T BC		TB 55	50	10.0	500	2,718 ST	1,359,000									
		TC 35	50	10.0	500	1,747 T	873,500									

200 ACRES, (3), 25 YEAR ROTATIONS - SITE QUALITY 50

CC P A11	0	60-80	200	22.5	4,500	70 ST	315,000	-20,000	- 1,300	293,700	0	293,700	6.50	100		
CC P A11	25	25	200	32.0	6,400	110 PW	704,000	-41,800	- 68,048	594,152	994,572	1,588,724		209		
CC P A11	50	25	200	32.0	6,400	373 PW	2,387,200	-87,600	-142,477	2,157,123	5,379,985	7,537,108		438		
CC P A11	75	25	200	32.0	6,400	1,262 PW	8,076,800	-123,600	-298,315	7,594,685	25,523,323	33,118,008				
												20,112,329				
												13,005,679				

(3) 25-yr. rotation
(1) 75-yr. rotation
Difference

CC = Clear Cut
P = Plant
(P) = Part
T = Thin
A = Stand designation
ST = Saw Timber
PW = Pulp Wood

$$13,005,679 = x \left(\frac{(1.05)^{75} - 1}{.05} \right)$$

$$= x \left(\frac{38.83 - 1}{.05} \right)$$

$$= 756.65x$$

$$\$17,188 = x$$

$$946,187.40$$

258

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APPENDIX 1

200 ACRE, 75 YEAR IMPERFECT ROTATION FOR RED-COCKADED WOODPECKERS

SITE QUALITY 60

ITEM	YEAR	HARVEST AGE	ACRES	CDS/ACRE TO HARVEST	TOTAL CORDS HARVESTED	VALUE CDS/ACRE	TOTAL HARVEST VALUE	REG. COST	ANNUAL MGMT. TAX COST	NET CASH FLOW	BALANCE AND INTEREST	CURRENT BALANCE	ACRES REG.	TAXES \$2.50	MGMT. COSTS \$4.00	REG. COST @ \$100
CC & P A	0	60-80	50	27.5	1,375	70 ST	96,250	- 5,000	- 1,300	106,825	57	106,825	50	6.50	35	100
T BCD			150	2.5	375	45 T	16,875									
T A	15	15	50	3.0	150	42 PW	6,237	0	- 30,380	- 24,143	222,082	197,939				
CC B	-20	80-100	50	31.5	1,575	186 ST	292,850	- 9,050	- 11,740	272,160	252,625	524,785	50		181	
T ABD	35	35	50	20.0	1,000	248 T	248,000									
		95-115	50	7.0	350	243 T	86,800									
		15	50	3.0	150	110 PW	16,500	0	- 54,870	296,430	1,090,991	1,387,421				
CC C	40	100	50	33.0	1,650	493 ST	813,450	-16,300	- 21,203	775,947	1,770,740	2,546,687	50		326	
		120														
T ABC	55	TA 55	50	20.0	1,000	1,024 ST	1,024,000									
		TB 35	50	20.0	1,000	654 T	654,000									
		TC 15	50	3.0	150	293 PW	43,950	0	- 99,102	1,622,848	5,294,379	6,917,227				
CC (P) D	60	120	30	30.0	900	1,308 ST	1,177,200	-17,670	- 38,295	1,121,235	8,028,329	9,949,564	30		589	
		140														
CC (P) D	75	135	20	32.0	640	2,718 ST	1,739,520	-45,900	-178,989	8,398,219	20,684,429	28,992,643	20		918	
		155														
CC (P) A		75	30	27.7	831	2,718 ST	2,258,658									
T (P) D		15	30	3.0	90	777 PW	89,930									
T BC		TB 55	50	20.0	1,000	2,718 ST	2,718,000									
		YC 35	50	20.0	1,000	1,747 T	1,747,000									

200 ACRES, (3), 25 YEAR ROTATIONS

CC P A11	0	60-80	200	27.5	5,500	70 ST	385,000	-20,000	- 1,300	363,700	363,700	363,700		6.50		100
CC P A11	25	25	200	45.9	9,180	110 PW	1,009,800	-41,800	- 68,048	899,952	1,231,617	2,131,569				209
CC P A11	50	25	200	45.9	9,180	373 PW	3,424,140	-87,600	-142,477	3,194,063	7,218,250	10,912,313				438
CC P A11	75	25	200	45.9	9,180	1,262 PW	11,585,160	-183,600	-298,315	11,103,245	35,259,788	46,363,033				
												28,922,648				
												17,370,385				

CC = Clear Cut
P = Plant
(P) = Part
T = Thinn
A = Stand designation
ST = Saw Timber
PW = Pulp Wood

$$17,370,385 = X \left(\frac{(1.05)^{75} - 1}{.05} \right)$$

$$= X \left(\frac{38.83 - 1}{.05} \right)$$

$$= 756.65X$$

$$\$22,957 = X$$

$$\$115/AC/YR$$

(3) 25-yr. rotation
(1) 75-yr. imp. rotation
Difference

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200 ACRE, 75 YEAR IMPERFECT ROTATION FOR RED-CKADED WOODPECKERS

SITE QUALITY 70

ITEM	YEAR	HARVEST AGE	ACRES	COS/ACRE TO HARVEST	TOTAL CORDS HARVESTED	VALUE CDS/	TOTAL HARVEST VALUE \$	REG. COST	ANNUAL MGMT. TAX COST	NET CASH FLOW	BALANCE AND INTEREST \$	CURRENT BALANCE	ACRES	TAXES REG. \$2.50	MGMT. COSTS \$4.00	REG. COST \$ \$100
CC & P A T BCD	0	60-80	50	32.5	1,625	70 ST	113,750	5,000	1,300	127,700		127,700	50	6.50		100
			150	3.0	450	45 T	20,250									
T A	15	15	50	4.0	200	42 PW	8,400	0	30,380	21,980	265,479	243,499				
CC B	20	80-100	50	34.3	1,715	186 ST	318,990	9,050	11,740	298,200	310,773	608,973	50		181	
T ABD	35	35	50	30.0	1,500	248 T	372,000									
		95-115	50	8.4	420	248 T	104,160									
		15	50	4.0	200	110 PW	22,000	0	54,670	443,290	1,266,012	1,709,302				
CC C	40	100	50	39.4	1,970	493 ST	971,210	16,300	21,203	933,707	2,181,551	3,115,258	50		326	
		120														
T ABC	55	55	50	25.0	1,250	1,024 ST	1,280,000									
		75	50	30.0	1,500	854 T	981,000									
		15	50	4.0	200	293 PW	38,600	0	99,102	2,319,600	6,476,397	8,795,997				
CC (P) D	60	120	30	35.5	1,065	1,308 ST	1,393,020	17,670	38,295	1,337,055	11,226,169	12,563,224	30		589	
		140														
CC (P) D	75	135	20	39.1	782	2,718 ST	2,125,476	45,900	178,989	10,360,178	26,118,040	36,478,219	20			
		155														
CC (P) A		75	30	28.8	864	2,718 ST	2,348,352									
T (P) D		15	30	4.0	120	777 PW	93,240									
T BC		75	50	25.0	1,250	2,718 ST	3,397,500									
		15	50	30.0	1,500	1,747 T	2,620,500									

200 ACRES, (3), 25 YEAR ROTATIONS - SITE QUALITY 70

CC P A11	0	60-80	200	32.5	6,500	70 ST	455,000	20,000	1,300	433,700	0	433,700		6.50	100	
CC P A11	25	25	200	59.2	11,840	110 PW	1,302,400	41,800	68,048	1,192,552	1,468,662	2,461,214			209	
CC P A11	50	25	200	59.2	11,840	373 PW	4,416,320	87,600	142,477	4,186,243	9,011,816	13,198,059			438	
CC P A11	75	25	200	59.2	11,840	1,262 PW	14,942,000	183,600	298,315	14,460,165	44,693,311	59,153,476				(3) 25-yr. rotation
												36,478,219				(1) 75-yr. rotation
												22,675,257				Difference

CC = Clear Cut
P = Plant
(P) = Part
T = Thin
A = Stand designation
ST = Saw Timber
PW = Pulp Wood

$$22,675,257 = X \left(\frac{(1.05)^{75} - 1}{.05} \right)$$

$$= X \left(\frac{38.83 - 1}{.05} \right)$$

$$= 756.85X$$

$$\$29,968 = X$$

$$\$190/AC/YR$$

260

**Weyerhaeuser Company**

Tacoma, Washington 98477
(206) 924-2345

November 25, 1981

Robert L. Carlton
National Forest Products Association
1619 Massachusetts Avenue, N. W.
Washington, D. C. 20036

Dear Mr. Carlton:

Two aspects of the Endangered Species Act have measurably impacted Weyerhaeuser Company timberland operations.

The first impact is the "multiplier" effect of the federal program encouraging additional local legislation through the active promotion and funding of State endangered species programs. Weyerhaeuser timberlands are located primarily in seven states, all of which have programs providing general wildlife protection at least four of which have specific endangered species programs, and three of which have endangered species agreement with the U.S. Fish and Wildlife Service. Though the federal act does not specifically regulate most activities on nonfederal lands, assumption has developed in the attitudes of many that any state and local government has not only that right but that responsibility. Increasingly the tenets of the Act are reflected in State and local programs and policies having far broader application than originally intended.

The second impact arises from the ambiguity in the definition of the term "taking." The recently issued regulations "taking" endorse the concept that habitat modification which impairs essential behavioral patterns (breeding, feeding, and sheltering) results in the actual death or injury to a listed species. The Company certainly has no desire to willfully destroy a threatened or endangered species. However our normal business practices necessarily do cause a vegetative change, which may leave us open to accusations focusing on habitat modification. Although we do not agree that otherwise legitimate private land use activities constitute a "taking", to prevent possible recriminations we have imposed voluntary restrictions on our operations to protect known nesting sites at quite a cost to us.

In our Western Regions, most of our efforts have been directed at protecting the nests and nesting sites of Bald Eagles. To date this has amounted to:

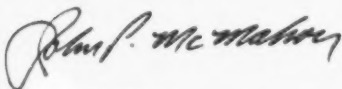
Oregon - 65 nests
 within 31 nesting sites

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Washington - 15 nests
within 10 nesting sites

These nesting sites can range from 3 to 40 acres and involve mature-to-old growth timber. At this point we have 900 acres set aside for Bald Eagle nesting sites and these acres are growing. At estimated timber values this is a minimum cost of \$9 million in unharvested timber. Management costs entail at least 1.0 man years/year and operational costs include the difficulty of logging around a leave block as well as the additional effort to coordinate the logical timing of harvest with the biological patterns of a species. In our southern regions we have identified 22 colonies of Red Cockaded Woodpecker. 155 acres are reserved or about \$115,000 of lost value. In addition approximately 100 man-days are necessary in the program administration.

- Legislative changes can serve to alleviate the second, and more serious, of these impacts. The Act should define "taking" to be more consistent with the historical interpretation of the term: intentional death or injury directly to living specimens of listed species. The inclusion of the word "actual" before "kills or injures" in the Fish & Wildlife Service's definition is an improvement in the wording but ambiguities remain; for example, at what level is an essential behavioral pattern significantly impaired? Clarification in the language of the Act would serve to lessen the burden of protection for private landowners while still retaining the Act's intentions.



John McMahon

dh


Wickes Forest Industries

A Division of The Wickes Corporation

 P. O. BOX 153 GRANGEVILLE, IDAHO 83530
 TELEPHONE (208) 983-1290

November 25, 1981

 Mr. Robert L. Carlton
 National Forest Products Association
 1619 Massachusetts Avenue N.W.
 Washington D.C. 20036

Dear Mr. Carlton:

In response to your request for comments on how the Endangered Species Act is having an adverse impact on the Forest Industries, I have two recent examples on the Nezperce National Forest:

1. Appeal of Decision to Build Jersey Jack Road in August 1981 by D.J. Grim and intervention by Idaho Wildlife Federation and the Idaho Environmental Council. The Statement of Reasons submitted claimed the decision by the Forest Service violates the Endangered Species Act. It claims that the action will have detrimental effects upon critical habitat for both Grizzly Bears and the Rocky Mountain Grey Wolf. Except for statements from one of the environmentalists supporting the action that he has seen both species within the area, we know of no one who has ever seen either of these animals within the area in question.

The appeal has already had an adverse impact on the local economy. The Forest Service lost a \$1,200,000.00 appropriation to build this road in 1981 and 1982. Idaho County has already been seriously affected by the current depressed lumber market. This action eliminated financing for some much needed employment in the County.

2. Appeal of Environmental Assessment and Notice of Decision, Soda Point-Four Mile Area on the Nezperce National Forest by the Idaho Environmental Council, Inc., in September 1981. The appellants state that the Forest Service has inadequately assessed the impact of the proposed timber sale upon endangered and threatened species. They base this upon the assumption that there may be bald eagles, peregrine falcons, and grey wolves in the area.

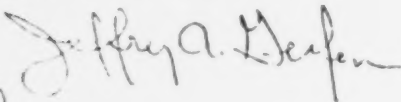
These appeals will have adverse effects upon the local economy. They will threaten and delay a continuous and dependable timber sale program on the Nezperce National Forest. The communities

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of Grangeville, Riggins, Elk City, Kooskia, and Kamiah are dependent upon timber from the Nezperce National Forest for their economic existence. Mills in these communities directly employ approximately 500 to 600 loggers and millworkers, and provide indirect employment to an additional 1000 to 1200 people in these communities. Environmental groups have threatened to appeal every proposed entry into the many RARE II roadless areas on the Nezperce National Forest.

The Endangered Species Act is only one of the many Federal laws used by environmental groups to threaten and delay orderly development of National Forest lands. Unfortunately, the real victims of their actions are the common working man and his dependents, county school and road budgets, and the rural economy dependent upon National Forest timber for their economic survival.

Very truly yours,



for
DONALD E. MacKENZIE
Woods Manager

DEM:jv

cc: Dave Edgerton

Mr. BREAUX. Next, testimony from Mr. Jerry Haggard.

STATEMENT OF JERRY HAGGARD

Mr. HAGGARD. Thank you. I am presenting this testimony on behalf of the American Mining Congress. We will appreciate the entire statement being included in the record.

Mr. Chairman, I think we all recognize the understandable desire to protect wildlife and other environmental values tended sometimes to produce legislation in the seventies with inflexible requirements which disregard other important national interests. I emphasize that the American Mining Congress does support the efforts to protect those values by reasonable methods which also allow the fulfillment of other national priorities and goals.

For this reason the American Mining Congress can support the purposes and policies stated in the Endangered Species Act, that is, to conserve endangered and threatened species and their ecosystems. However, while establishing a policy of conservation, much of the act mandates absolute preservation. This is the reason that since 1973 there have been more than a dozen amendments to the act making a variety of special exceptions ranging from the completion of a \$120 million dam down to allowing one individual to retrieve an ivory tusk cane.

But these patchwork amendments have not resolved the underlying problem of the inflexibility of the act. We have attached to this statement a series of recommended amendments to the act which

we urge be adopted. They center around four basic areas: First, section 7; second, listing of species; third, critical habitat designations; and fourth, recovery and translocation of species.

Referring to section 7, when the Endangered Species Act was passed in 1973, section 7 was a short section, only 13 lines long. It prohibited all Federal agencies from conducting or permitting any activity which might jeopardize any endangered or threatened species or modify their habitat. This provision caused the courts to decide that no other objectives, not economic, prevention of hardships, or other national policies, could be carried out if a species or habitat were to be harmed.

As a result of the Tellico Dam litigation, section 7 was amended in 1978. But this prohibitive language in section 7 remained. What was added were eight pages of statute describing the process supposing to allow special exemptions after the original provisions of the section halted the activity.

Mr. Chairman, during these hearings you have been told and will be told that section 7, the exemption process, is not a problem because not many developments have been stopped by that process. The reason for this is obvious to anyone reading that section and the regulations implemented under it.

The process involves four levels of review ending with a board of seven Presidential Cabinet members who may approve an exemption only by not less than a 5-to-2 vote. Only nine of those steps in the process prescribe time limits. The total time allowed for those nine steps, from the commencement of the process to a possible exemption, is 810 days, more than 2 years.

But that is not all. This does not include the other six or more steps in the process that do not have time limits. And it also does not include the time that would be required for judicial review, which is allowed for in three separate steps of the exemption process.

So we are not speaking of delays in terms of just years, we are speaking of delays in terms of many years. And because of that it is no wonder that the exemption process has not stopped many developments. The only two that have gone through the process were mandated by Congress, and a 90-day limit on that review was placed on the exemption committee.

The major change we urged in section 7 is to create a simplified but still effective system to allow the responsible Federal agency, with the assistance of the Fish and Wildlife Service, to exercise its own judgment: first, to determine the effect of its action on a species or habitat; second, to weigh that effect with the benefits of the action; and third, to mitigate adverse effects.

Our recommendation in this respect parallels closely the observations made recently by the court in the Cabinet Mountains case. The court made this statement. I think it's worth reading. The judge in the case said a Federal judge sitting in Washington, D.C., is asked to speculate on whether there are grizzly bears in a portion of Montana and whether holes drilled in a mountainside will frighten those bears away. The court said that this is not a task judges are equipped to perform and is not a task they should perform.

Mr. Chairman, we ask that you consider whether a board of seven Presidential Cabinet members is equipped any better than a judge to perform this task.

Another area that is addressed more fully in our testimony is in the listing of species. The present statute provides that species may be termed endangered if it is in danger of extinction or threatened if it is likely to become endangered throughout all or even a significant part of its range. This allows a species to be listed as endangered or threatened in some geographic areas even though it may be abundant in other areas.

Almost every species, of course, has a range of habitat that grades down to zero, possibly from abundance, in various areas. We recognize many people consider it esthetically desirable to increase the population of those species even in fringe areas. But that should not be the goal in which the act is directed.

The goal should be to prevent the extinction or danger of extinction of those species, not to apply the severe restrictions which conflict with other national needs to fringe areas in order to increase populations in those areas.

Mr. Chairman, our other testimony is included in our statement. We will appreciate your giving serious consideration to our proposed amendments, whether or not the threat has been fully realized in a great number of cases now.

Thank you, Mr. Chairman.

Mr. BREAUX. Thank you, Mr. Haggard.

[The statement of Mr. Haggard follows:]

PREPARED STATEMENT OF JERRY HAGGARD, AMERICAN MINING CONGRESS

Mr. Chairman and Members of the Subcommittee, we appreciate the opportunity to present this testimony on behalf of the American Mining Congress which is a national trade association consisting of companies producing most of America's metals, coal and industrial and agricultural minerals, manufacturers of mining and mineral processing equipment and supplies, and engineering and consulting firms and financial institutions that serve the mining industry. My name is Jerry L. Haggard, from the law firm of Evans, Kitchel & Jenckes, P.C., Phoenix, Arizona and a member of the Public Lands Committee of the American Mining Congress. We hope this testimony will assist your subcommittee in identifying, and considering solutions to, the problems which are being experienced and which can be anticipated in the operation of the Endangered Species Act of 1973.

The basic framework for the Endangered Species Act was passed in 1973. As with much legislation of the 1970's dealing with wildlife, forests and other environmental resources, the understandable desire to protect those values tends sometimes to produce legislation with inflexible requirements which disregard other important national needs. The American Mining Congress supports the efforts to protect those values by reasonable means which also allow the fulfillment of other national priorities and goals. For this reason we can support the purposes and policy of the Endangered Species Act to "conserve" endangered and threatened species ecosystems and for federal agencies to further that purpose.

While establishing a policy of conservation, much of the Act mandates absolute preservation. It is for this reason that since its passage in 1973, there have been more than a dozen amendments to the Act making special exceptions for a variety of matters from allowing the completion of the \$120 million Tellico Dam to allowing an individual to retrieve a narwhal ivory tusk cane. However, this series of patchwork amendments has not yet dealt with the underlying problems of the Act which cause the special exemption amendments to be necessary.

We have attached to this statement a set of amendments¹ which the American Mining Congress urges be adopted. These amendments and other conforming amendments center around four areas:

¹ Amendments have been placed in the subcommittee files.

1. Section 7 prohibitions and exemption process.
2. Listing of species.
3. Critical habitat.
4. Recovery and translocation of species.

SECTION 7 PROVISIONS

When the Endangered Species Act was passed in 1973, Section 7 was short a provision (13 lines) entitled "Interagency Cooperation" which grew to become the most controversial provision within the statute. This section provided (and still provides) that all federal agencies shall insure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of any endangered species or threatened species or result in the destruction or modification of their habitat. The literal inflexibility of this provision caused courts to decide that no other objectives—economics, hardship or other national policies, other than the avoidance of jeopardy of species or modification of their habitat, could be carried out by federal agencies. This section received nationwide attention when it was used to block the completion of the Tellico Dam Project after other attempts failed to block the project under the National Environmental Policy Act, the National Historic Preservation Act, the Federal Water Pollution Control Act and Flood Control Act of 1936.

As a result of this litigation, Section 7 was amended in 1978, but the prohibitive language described above remained. What was added to Section 7 were eight pages of statute describing a process purporting to provide for a special exemption after the original provisions of the Section have halted all activities.

During these hearings, you will be told that the Section 7 exemption process is not a problem because not many developments have been stopped by following that process. The reason not many developments have been stopped must be readily apparent to anyone who has had the patience to read Section 7 and its supplementing regulations. The process involves four levels of review ending with a board of seven Presidential Cabinet members who may approve an exemption by not less than a five to two vote. There are time limits for some steps in the exemption process. The total time allowed for the nine steps which have time limits, from the commencement of the process to a possible exemption, is 810 days—more than two years. This does not include the time to follow more than six other steps in the process which have no time limitations and this does not allow for any of the time which may be taken by judicial review at three separate stages in the process. The Fish and Wildlife Service has estimated that it would take three years to render a biological opinion which is only one of the first steps of the process.

It is no wonder why the Section 7 exemption process has not stopped many developments. The only two proposed developments which have completed the exemption process (Tellico and Gayrocks), were ones required to do so by the statute which also placed a ninety day limit on the process. If one of the American Mining Congress member mining companies, having invested in a several hundred million dollar development, were faced with the exemption process procedure, the results would likely be disastrous.

The major change we urge in Section 7 is to create a simplified but effective system, replacing the totally unworkable present exemption process, to allow the federal agency with the assistance of the Fish and Wildlife Service to exercise its own judgment to determine the effect of its action on a species or habitat, to weigh that effect with the benefits of its action, and to mitigate and adverse effects. This parallels closely the observations made recently by the Court in *Cabinet Mountains v. Peterson*, 510 F. Supp. 1186 (D.C. 1981):

"[A] federal judge sitting in Washington, D.C. is asked to speculate on whether there are any grizzly bears in a portion of Montana and whether holes drilled into a mountainside will frighten those bears away. That is not a task judges are equipped to perform, and, in any event, it is not a task they should perform. Congress has established agencies and prescribed procedures for resolving these questions, and all that a court can do is to make certain that the agencies take their responsibilities seriously and perform them conscientiously."

Mr. Chairman, we ask that you consider whether a board of Cabinet Officers sitting in Washington, D.C. is equipped any better than a judge to perform this task.

A study prepared for the Department of the Interior last year by Resource Planning Associates observed that species vary in their relative biological and social importance and, while this importance cannot be evaluated objectively, suggestions were made for a subjective method of evaluation. Such a method could be utilized by the responsible agency balancing the possible harm to a species with the value of a proposed project. This will place a considerable amount of responsibility on the

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decision maker. However, unless the Section 7 restrictions are to be applied to minor effects on the least significant of species the same as it would be applied to the most severe effects on the most valuable of species (which we suggest would be extremely unwise public policy and a waste of resources), somebody must assume this responsibility and make the decisions. This should be the agency authorized to carry out or permit the proposed action. If the existing exemption process is to be retained in any form, we urge that it at least be limited to those severe cases in which there is a serious likelihood that the proposed action could result in the extinction of a higher life form of species.

The Section 7 process places every proposed exemption in the same posture as if the proposed action would certainly exterminate a species if it proceeded. However, the terms of Section 7 do not limit its prohibitions and the exemption process to such extreme cases. Instead, the prohibitions and the process apply even to proposed actions which might result only in an adverse modification of only part of a critical habitat. It is not an efficient use of resources to treat all situations as the most extreme.

The several recommendations in the attached amendments are not designed to weaken the Section 7 process but to place some balance in the process. One of our recommendations to achieve this balance is to add a standard of significance to the extent of jeopardy which could be caused to a species and to the extent of adverse modification which could be caused to a critical habitat. The Section 7 provisions would not apply if an agency insures that its action is not likely to significantly jeopardize a species or result in a significant adverse modification to a critical habitat.

Finally, there is a problem with Section 7 applying to any species not endangered or threatened if it resembles in appearance an endangered or threatened species so closely that enforcement personnel would have difficulty in differentiating between the species. Because of the careful review provisions under our proposed amendments to Section 7, ample opportunity is provided to distinguish between listed and similar species, and confusion should not occur. Therefore, we believe similar appearance species should not be subject to Section 7.

LISTING OF SPECIES

A second area in which we urge several modifications be made is in the listing of species. The present statute provides that a species may be termed endangered if it is in danger of extinction, or threatened if it is likely to become endangered, throughout all or a significant part of its range. This allows a species to be listed as endangered or threatened in some geographic areas even though it may be abundant in other geographic areas. An example of this is the grizzly bear which is listed as threatened in the 48 coterminous states but is unprotected in Canada and Alaska and is even abundant enough in northwestern Montana that hunting the grizzly is allowed. A similar situation exists with the gray wolf, which is listed as endangered, but the killing of which is allowed in Minnesota. Almost every species has adapted to certain climates, latitudes and altitudes and, while abundant in their central area, their population may grade to zero in other areas. We recognize that many people consider it aesthetically desirable to increase the populations of these species in these fringe areas. But that is not, and should not be, the goal to which the severe structures of the Endangered Species Act are directed. The goal should be to prevent the extinction or danger of extinction of these species, not to apply severe restrictions (which conflict with other national needs) to fringe areas in order to increase populations in those areas.

Another area to which consideration should be given is limiting the listing of species of lower forms or less significant forms of life. We realize that this concept is objectionable to some in the scientific community. And we realize also that ideally, and strictly from the scientific point of view, it may be desirable to protect every living organism including the lowest forms of life. But we must begin to realize that our government cannot do everything everyone asks it to do even if it has merit. It must be recognized that financial and labor resources are limited. Once that is recognized, the conclusion must be that priorities must be established so those limited resources may be directed to the areas where they will do the most good. The Resources Planning Associates study we referred to earlier recognized this problem and suggested a method of judging the importance of species in allocating budgets. Although we have not proposed language to accomplish this, we urge that a similar system be applied to the determination of what species should be listed.

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CRITICAL HABITAT

We believe that revisions should be made in the system for designating and managing critical habitats. Prior to the 1978 amendments, testimony revealed that the public notice system for proposed listing of species was not effective because critical habitats for those species were not disclosed to allow local government and the public to know whether the listing would impact their area. The 1978 amendments required, "to the maximum extent prudent" the critical habitat be published with the notice of the species listing. The committee and conference reports for the 1978 amendments stated clearly that the Secretary will, in most cases, give public notice of the critical habitat at the time a species is listed and it would be rare instances in which critical habitats would not be included in the public notice. Instead, the practice has been that only in rare instances are the critical habitats revealed. The result is that the correction intended by the 1978 amendments has not been made. The amendments we propose would correct this problem.

RECOVERY AND TRANSLOCATION PROGRAMS

The amendments proposed by the American Mining Congress would strengthen the species recovery and translocation programs designed to increase populations of endangered and threatened species with the objective of increasing their populations to allow delisting. However, many have a legitimate concern that translocations of listed species will result in the creation of additional critical habitats with the attendant restrictions on resource uses. Therefore, the amendments we have proposed, although supporting species propagation by transplanting in other areas, would not allow those areas to be designated as critical habitats or allow the strictures of Section 7 to apply to those areas.

Mr. Chairman, we urge your committee to recognize the serious threat which the Endangered Species Act and its administrative system pose to the orderly development of the nation's water and mineral resources even if it can be assumed that this threat is limited to only a few, albeit major, projects. The opportunity for abuse of the system has been demonstrated. We recognize that a rational system which can minimize harm to endangered or threatened species and their habitats is a desired national goal. However, this goal must be balanced with other equally important goals which the United States must carry out. We urge your committee to give serious consideration to and adopt the amendments which we have attached to this statement.

Thank you for your attention and for the opportunity of the American Mining Congress to present to this Subcommittee these changes which should be made in the Endangered Species Act of 1973.

Mr. BREAUX. Mr. Berlin, National Audubon Society.

STATEMENT OF KEN BERLIN

Mr. BERLIN. Thank you.

I would like to submit my formal testimony. I am testifying on behalf of a large number of environmental groups. My testimony and task today is essentially tie the proposed amendments you have heard about in the last few minutes to reality. We have a reality we can tie those amendments to. That is the long history of the implementation of this act. Since it passed in 1973 there have been tens of thousands of consultations under section 7 of the act. We are at a stage where we can make, I think, a careful determination of how the section has been working and we think that determination shows the section has in fact been working remarkably well both from an environmental and economic viewpoint.

Over the last 3 years the section 7 consultation process has been utilized 9,686 times. In other words, on 9,686 occasions were endangered species in an area raising the possibility that might affect a Federal activity. What's happened? Out of those 9,686 examples, in 185 cases the Fish and Wildlife Service found that the project might indeed jeopardize the survival of a listed species.

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But making that finding, Mr. Chairman, does not indicate that the project will not be able to proceed, because every jeopardy opinion includes in it a list of suggested alternatives that if followed will remove the jeopardy. In fact we find in virtually every case those alternatives have been acceptable. We know in fact that of the 185 jeopardy opinions in the last 3 years, in only 15 has the project not yet proceeded. In 7 of those 15, consultations still continue, so the act has not blocked the project.

In six others, the project was dropped for clearly economic reasons having nothing to do with the jeopardy opinion, and the details of all of those projects are specified in my written testimony.

That leaves us only two examples of projects that might have been dropped in the last three years; two out of 9,686, I might add, where the project was arguably stopped by the Endangered Species Act, and even there we don't know whether in fact the project was dropped for economic reasons or for reasons related to the jeopardy opinion.

Therefore, we believe that this act has been doing exactly what Congress wants an environmental statute to do: protecting endangered species without stopping economic growth. We have hundreds of examples of species that have been protected by modifications of projects. We have 170 where jeopardy was found. We have hundreds of others where a project was modified early enough.

I am not saying that there are no economic costs in accepting those alternatives. However, we believe those costs are justified because in every case the project has remained profitable.

When you look at environmental statutes, that is what you look at: does the statute protect the environment without making projects unprofitable. The answer here is yes, this act is doing that.

I would like to turn next to the exemption process which this committee knows has not been tested in the last 3 years. We believe that there are two basic reasons for that. It is not the reason just stated by Mr. Haggard.

The basic reason is that in fact there have been very, very few instances where it was necessary for developers to consider going through the exemption process. That is best epitomized by the fact that at most in only 2 out of 9,686 times have we reached the point of a project needing an exemption.

We are sensitive to complaints from Mr. Haggard or others that the time set forth is too long. My count is 450 days, not 810 days.

Later this afternoon you will hear testimony from Pat Parentau of the National Wildlife Federation, which includes a proposed amendment to the exemption process which would cut its time limit down to a maximum of 225 days. The groups on whose behalf I testify have not had time to review that amendment, but we support all amendments that make the act work better.

I would like to respond to Mr. Haggard's misuse of a quote by a Federal judge in a case involving ASARCO. Mr. Haggard said the judge stated he should not make biological decisions and Mr. Haggard implied the same logic applies to the exemption process and therefore, the process does not work. That misstates the role of the exemption committee. That committee does not look at the biological status of the species.

Essentially the role of the Exemption Committee is to measure the economic worth of the project. If they find the project is of national or regional significance that alternatives have been considered and mitigation insured, they grant the exemption.

The hard biological opinion is what we arguably don't want Cabinet members to make—but they are not being made by Cabinet members, they are being made by the Fish and Wildlife Service.

I would also like to turn to the question of delay in this statute, which has not been emphasized during this testimony, but I am sure the committee will hear a great deal about it. The act provides for a 90-day period in which consultation has to take place.

The National Wildlife Federation has done a study of 600 of the most controversial biological opinions and found the average time is 78 days. The Fish and Wildlife Service in a document attached to my testimony looked at 1,845 projects and found that the average time was 59.7 days, 30 days less than specified in the statute.

There are many consultations that take 1 day, some that take less than 1 day. There are also consultations that take a great deal longer than that. I would like to address those for 1 minute.

Fish and Wildlife data shows during the last 3 years 278 consultations out of 9,686 have lasted more than 90 days. In looking at that figure, several factors should be kept in mind.

First, the Regional Director of Fish and Wildlife Region 6, the region where most western dam projects are located—they are the projects delayed the longest—has stated that he does not believe the Endangered Species Act has led to any delays in those projects.

In virtually every case where consultation extended beyond 90 days, there were other factors that were also holding up the project at the same time. So, my first point is even where we have a consultation that extends beyond 90 days, it is a jump in logic that can't be made to say that means the project was delayed beyond that time period by the act. There are other factors involved that could have done it.

The Fish and Wildlife data, moreover, shows that the delays are rapidly diminishing. They did a study that showed with respect to no jeopardy opinions, where the consultation extended beyond 90 days, in 1979 the average extension was an additional 89 days, or 3 months. In 1980 that time was cut down to 71.1 days and in 1982 was cut down to only 42 days, or more than cut in half.

For projects where jeopardy was found where the consultation extended beyond 90 days, in 1979 the average extension was 119 days, or 4 months. In 1980 it was only 81.9 days, and in 1981 it was down to 37.1 days. So, we are now in a situation where extensions are taking on the average slightly more than a month beyond the 90-day period specified in the statute.

I think there is a reason why these delays are beginning to diminish; that is, some of these species that we are dealing with have very, very complicated life histories. It has taken the Fish and Wildlife Service a period of time to determine their status in the wild.

Now, one example, of course, is some fish on the Colorado River are involved in some of the dam projects there. The Fish and Wildlife Service just concluded a 3-year study on their status, and I think we can safely predict, with the conclusion of that study, that

the delays will begin to markedly diminish because the data is available and just needs to be applied.

I would next like to turn to the specific examples that have been given by industry of problems with the section 7 process and even with the section 9 process.

Quite frankly, my task is made easier because as far as I can see, no specific examples have been presented this morning. In my testimony I tried to go through every example that we know about from the December 8 oversight hearings in the Senate and to give a detailed explanation of the problems. I would like to briefly summarize several of those.

First, the one that was referred to this morning was the example in South Dakota of the blocking of the use of compound 1080 because of the existence of black-footed ferrets. Attached to my testimony is a biological opinion done by the Fish and Wildlife Service analyzing the effect of compound 1080 on ferrets.

It did find jeopardy, jeopardy unless certain alternatives were accepted. It recommended two alternatives. One was the use of another compound, zinc phosphide, which South Dakota says has not been effective. I will address that in a moment.

The second is it did not find that 1080 could not be used as a rodenticide. It found, however, that before it could be used there would have to be a label restriction on the chemical saying that a status survey should be done of the particular prairie dog colony to see if there is any evidence of black-footed ferrets. If the status survey showed there was no evidence, they could use compound 1080.

That seems to us a reasonable restriction to place on the use. There are very few black-footed ferrets, and status surveys would reveal very few examples of contact with the species.

I might add that we have a briefing paper done by the Fish and Wildlife Service as a followup to the South Dakota testimony. It states that Ron Henson, area damage control supervisor for the office, met with Mr. Pearson on March 3, 1982, to discuss prairie dog control. I quote:

"It was generally agreed that control would be intensified with zinc phosphide and a recommendation would be made that research into additional, more effective, and less expensive toxicants should be accelerated.

This might include the use of 1080 in significantly lower concentrations than in the past." End of quote. So, this is a problem that is being addressed. The characterization of the biological opinion was incorrect, I think, on February 22.

I might add that a year ago South Dakota brought a lawsuit against the Federal Government challenging the Federal Government's failure to take care of the prairie dog. It never mentions having a problem with 1080. We thus have a situation that warrants further careful consideration by this committee.

I might say one brief thing about the Houston toad example. It was cited extensively in the Western Regional Council's testimony before the Senate. I don't believe it is cited in their testimony today.

I might just read one thing from the Fish and Wildlife briefing paper; that is and I quote: "The Western Regional Council states

that critical habitat overlaps part of Camp Swift military reservation where the best landfill site was located.

"Critical habitat does not overlap Camp Swift. The city had to limit its operation to areas outside of the critical habitat even though areas within the critical habitat suitable for landfill were not suitable for the use of the toad.

"If they made this decision, it was entirely on their own since the service had no involvement. Had they contacted us, we would have identified suitable sites where a landfill would not have destroyed or adversely modified the critical habitat." End of quote.

I cite that because it is again a demonstration that in reality the history of this process is that it works. When people sit down and try to resolve conflicts, they are able to resolve conflicts.

I will not go into all of the details of the potential problems with the act. My testimony includes a detailed analysis of western water projects and how the act is related to them.

I would like to turn to section 9 of the act, the "harm" provision, mainly because I have not seen the forest products testimony today, but their original testimony did list two examples of problems, with the Endangered Species Act and, despite their proposing extensive section 7 amendments, those examples relate to section 9.

I might say the Fish and Wildlife Service conducted extensive review of the definition of "harm" and the definition of "take" the issue here. They received over 300 comments on the section, over 30 which they listed as substantive. They have come up with a new provision we think should be given a chance to work.

Beyond that, though, there were two examples cited in the Forest Service testimony. One concerned eagles in the Northwest. I just might say that we don't regard that as a legitimate example because eagles are in any event protected under the Bald Eagle Protection Act, and even if the Endangered Species Act was repealed, they would still have that protection.

The next examples relate to woodpeckers in the Southeast. Two examples are cited in the December 8 testimony, both voluntary programs by timber companies to protect the red-cockaded woodpeckers.

In one of them the company says they spent between \$86 and \$150 per acre to protect the species while at the same time proceeding with lumbering operations. We have a result we regard as acceptable under the statute. We have a situation where the companies have been able to proceed with their operation and still protect the species.

There are ways the companies can be creative under the act; for example, using section 10 for permits, something you may hear about from the next witness, where a party could come in and say we have developed a management plan that helps that species; therefore, even if we affect parts of the habitat, that is acceptable.

We think that is an approach that should be considered. Beyond that, however, the forest products industry has also proposed tax incentives and tax breaks to the industries involved.

While they have not proposed a bill and, therefore, we cannot comment specifically, we in the environmental community have no theoretical objections to such legislation and would likely support it.

With that, I will conclude my testimony. There are other areas I address in my written statement. I will save those to answer any questions.

[The statement of Mr. Berlin follows:]

PREPARED STATEMENT OF KENNETH BERLIN, NATIONAL AUDUBON SOCIETY

Mr. Chairman and members of the subcommittee, I am counsel and Legislative Director for Wildlife for the National Audubon Society. I am also chairman of a committee that is coordinating the activities of a large number of groups concerned about the reauthorization of the Endangered Species Act. I would like to thank you for giving me this opportunity to testify on behalf of the National Audubon Society and the groups listed below* in support of the need for reauthorizing a strong and effective Endangered Species Act.

Earlier today, you heard Michael Bean of the Environmental Defense Fund propose, on behalf of the same groups for whom I also testify, several amendments which we believe will strengthen the Act. My testimony will address many of the criticisms of the workings of Sections 7 and 9 raised by industry and economic interest groups.

Taken together, the criticisms of industry relate to the following: (1) Section 7 and its economic impact; (2) the effect of the Act on western water users, (3) the Act's coverage of local populations of animals; and (4) the impact of Section 9 on private development. In this testimony, I will respond to industry's statements in each of these areas.

I. Section 7 Has Worked Extremely Well

Section 7 prevents any federal agency from taking any action that is likely to jeopardize the survival of a listed species or

adversely affect its critical habitat. When a possible conflict exists between a species and a federal action, the federal action agency consults with the Fish and Wildlife and/or the National Marine Fisheries Services and one or both of these services issues a biological opinion stating whether the action will jeopardize the survival of the species. If the Service finds jeopardy, the action agency or the project sponsor can seek an exemption from the Section 7 prohibitions.

The Section 7 process is widely misunderstood. Its impact on economic development has been grossly and unfairly exaggerated.

The first misunderstood factor about Section 7 is the scope of its prohibitions. Contrary to some comments about the Act, the Section 7 jeopardy provision applies only to the species as a whole, not to individuals of a species. Thus, before the Fish and Wildlife or National Marine Fisheries Service can make a jeopardy finding, it must decide that the federal activity will jeopardize the survival of a listed species, not just the survival of one individual of the species. The limited nature of Section 7 is best demonstrated by the fact that of the 9,686 consultations the Fish and Wildlife Service conducted during the past three years, only in 185 (1.9 percent) of these did the service find a sufficient conflict between the species and the project to make even a preliminary jeopardy finding. In recent years, the government and the courts have found no jeopardy with respect to many projects with impacts on individuals of endangered or threatened species. For example, they found that a highway affecting bald eagles near Coeur D'Alene, Idaho, which had potentially severe impacts on eagle habitat, did not jeopardize the survival of that

species. While environmental groups have not always agreed with all these decisions, the incontrovertible point is that adverse impacts on individuals of a listed species will not alone stop a federal action.

Another misunderstood point concerns the extent to which Section 7 applies to private land. In particular, critics argue that Section 7 stops all private development on areas designated as critical habitat. In fact, similar to the jeopardy clause, the critical habitat clause applies only to federal action. Thus, no part of Section 7 applies to private land unless a federal action is involved.

It is also incorrect that Section 7 is inflexible and stops or slows economic development. Rather, the section provides an accommodation between economic development and species protection through an exemption process, the end result of which is based largely on economic grounds. As explained in the testimony presented today by Pat Parenteau, the National Wildlife Federation is proposing to reduce the time required for an exemption from a maximum of 450 to 225 days. This amendment addresses the complaints of those who believe that the current process takes too long; the groups on whose behalf I testify generally support attempts to improve the Act's procedural provisions.

Of equal importance to the exemption process, however, is the fact that Section 7 helps identify, and therefore avoid, conflicts between species and economic development. If adverse effects upon a species are found early in project planning, the project can often be modified to avoid conflict. That is exactly what happens in most

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instances. In Fish and Wildlife Region 7, for example, the director wrote that 90 percent of potential conflicts are resolved through informal consultation proceedings. Formal consultations, even those leading to jeopardy opinions, are just as likely to resolve conflicts. After requiring slight modifications in the proposed project, the Fish and Wildlife Service found that project sponsors could avoid jeopardy with respect to preliminary oil exploration in the Beaufort Sea, mineral exploration in the Cabinet mountains in Montana, levee construction by McGee Creek Levee and Drainage District, Illinois and in many other cases. Attached is a summary of nine jeopardy opinions issued through or by the Honolulu office of the Fish and Wildlife Service showing the successful resolution of each potential conflict.

Also attached is a summary sheet prepared by the Fish and Wildlife Service showing that in all but 15 of the 185 cases, the project sponsor was able to proceed after the issuance of the jeopardy opinion. In seven of the fifteen cases, consultation continues, and in six of the instances, the sponsor halted the project for reasons unrelated to the opinion. In the remaining two cases, it is not clear whether the jeopardy opinion or unrelated economic reasons stopped the project. Thus, while environmental groups or industry may disagree over various aspects of these opinions, the fact remains that in virtually all cases, project sponsors have successfully modified their projects to avoid conflict with endangered or threatened species; in no case anywhere in the country has a

project sponsor sought an exemption during the last three years.*

Finally, contrary to earlier testimony, the Section 7 consultation process does not delay projects unreasonably. The Act provides that the relevant service must complete consultation within 90 days. A recent National Wildlife Federation study of more than 600 consultations shows an average consultation time for each opinion of 78 days (2.6 months). Even when there have been delays, there are very few examples of the Act alone delaying a project. As the acting regional director in Region 6 wrote, "We believe that there have been few instances in Region 6 where projects have been delayed solely because of the Endangered Species Act. In most cases there have been other problems that would have delayed the projects even if the Endangered Species Act did not exist." Again, a careful review of the facts reveals the Act is working smoothly, exactly as Congress intended.

To conclude, even by the most conservative standard of economic review, a statute is remarkably successful in finding the proper balance between economic growth and environmental protection if it protects species without stopping projects of economic importance. The Endangered Species Act has succeeded in achieving this fine balance. In many cases of conflict between the species and the project, the sponsor has modified the project

* In one case a project sponsor applied for an exemption, but a court ruled that the application was premature.

to protect the species. While this might make the project somewhat more costly, the Act is working if it does not make the project uneconomical. Indeed, as the testimony of the scientific experts present on February 22 established, the avoidable loss of species could cause incalculable economic damage and other losses to humanity. The extra cost to a project sponsor for protecting species merely internalizes a fraction of that cost. Moreover, the Act provides an ultimate exemption from its provisions if the project cannot be altered and if it is of sufficient economic importance.

A. Industry Has Not Produced Any Examples of Section 7 Problems

As of the date of the preparation of this testimony, industry sources have identified only the following handful of alleged problems with the Act: (1) the ASARCO Cabinet mountain exploration delay (Western Regional Council); (2) the Wildcat Reservoir jeopardy opinion (Id.); (3) Wicke's Forest Industries problems in the Nezperce National Forest (Forest Products Industry); (4) South Dakota's inability to use compound 1080 as a rodenticide; (5) the delays in granting permits for dam construction on the Colorado and Green Rivers (Colorado River Water Conservation District and the Western Water Resources Council); (6) bald eagle protection in the Northwest (Forest Products Industry); (7) red-cockaded woodpecker protection in the Southeast (Id.); and (8) the Northeast Utilities nuclear plant at Montague, Massachusetts. The last three of the alleged problems relate to Section 9 of the Act, not Section 7, and will be addressed in the discussion of that section. The water projects will be discussed in the next section.

B. The Cabinet Mountains Example

The Western Regional Council (hereinafter WRC) cites the ASARCO example to allege that the Department of Interior used the Act to

delay and burden a project when in fact there was no legitimate reason to do so. A review of the facts, as more fully described in the attached memorandum prepared by the Fish and Wildlife Service Area Manager in Billings, Montana, establishes that many of the statements made on behalf of ASARCO are "incomplete or a distortion of the facts." When the facts are accurately characterized, they do not support ASARCO's claim.

The WRC pointed out in prior testimony that the exploration arm of the Kennecott Corporation discovered copper-silver mineralization in 1963 in the area that subsequently became the Cabinet Mountains Wilderness. ASARCO acquired the relevant exploration rights in the early 1970's and finally in 1979, 16 years after the Kennicott discovery, decided to extend its active exploration within the wilderness boundary. On April 2, 1979, the Forest Service approved ASARCO's plan of operation; the Forest Service, however, did not initiate consultation until May 21, 1979. The Fish and Wildlife Service issued its biological opinion on August 3, 1979. Thus:

- 1) The Fish and Wildlife Service issued its biological opinion in less than 80 days, well within the 90-day period specified in the Act. Any delay resulted from the seven weeks it took the Forest Service to initiate consultation.

- 2) Even if we include the seven-week delay as part of consultation and assume that consultation took four to five months, it took the exploring companies 16 years to begin exploration. That hardly puts them in a strong position to complain about a one or two month delay.

- 3) During the period of the consultation, ASARCO drilled two

holes outside the wilderness area within 1,500 feet of its proposed site.

The WRC also suggests that there is no biological justification for the Fish and Wildlife Service's treating the project as one that might jeopardize the grizzly bear. That issue is fully responded to in the attached Fish and Wildlife Service memorandum. In summary:

a) The grizzly bear has undergone a 99 percent reduction in its numbers and range during this century.

b) Contrary to the WRC statement, the biological assessment identified 28 sightings of grizzly bears or their signs in the Cabinet mountains. Researchers have since observed four grizzlies approximately four or five miles from ASARCO's claim block during one reconnaissance flight.

c) According to the Fish and Wildlife Service memo, the assertion that the only area impacted is the specific area occupied by the drilling rigs (one-half acre) is ludicrous.

d) Contrary to the WRC testimony, ASARCO has not conducted expensive research (p. 7 of Fish and Wildlife memo).

To conclude, the Cabinet Mountain example illustrates the fact that the Act works exactly as Congress intended. Within 90 days of the beginning of the consultation process, the Fish and Wildlife Service completed its biological opinion. Eventually, the project was approved with a seasonal, drilling restriction that protects the endangered species without stopping the project. Equally significant, the example represents an unsuccessful attempt to blame the

Act for a myriad of problems ASARCO faces. As pointed out in the Fish and Wildlife memorandum, the Forest Service placed 61 additional restrictions on the project. Moreover, the project is in a wilderness area and the strictures of that Act are far greater than those in the Endangered Species Act.

C. The Wildcat Reservoir

The WTC Wildcat Reservoir example, cited as evidence that the Act is adversely affecting western water use, establishes only that projects are more often delayed by ideology than by environmental restrictions.

The Wildcat Reservoir problem arises out of the necessity of the project sponsors to obtain a 404 permit from the U.S. Army Corps of Engineers prior to discharging dredged or fill material into Wildcat Creek incident to the construction of a reservoir approximately two miles upstream from its confluence with the South Platte River. Following the issuance of a biological opinion finding that the project might jeopardize whooping cranes unless the sponsors agreed to mitigation measures, the Corps informed the sponsors that they could not grant a nationwide 404 permit and that an "individual permit" processed in the usual manner would be required before constructing the dam.

The project sponsors never sought that permit. Instead, they instituted what promises to be a multi-year litigation to establish in essence that the Act cannot be applied to their water rights. The sponsors instituted the suit despite the fact that the Corps had not denied their permit and despite the fact that similar projects have proceeded, albeit with modifications (here the sponsors estimate their project's value at \$181,300,000

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in a taking claim in the lawsuit). The example is, thus, one of ideology replacing common sense, not of a problem with the Act.*

D. The Wickes Example

Although the forest products' industry proposes to completely gut Section 7 of the Act, the only example it provides of a Section 7 problem concerns two appeals within the Forest Service of a proposed road and timber sale. As far as we know, however, the Fish and Wildlife Service has not been asked to issue a biological opinion and there has been no jeopardy finding. Rather, since the land is national forest land that must be managed for multiple-use purposes, these appeals would occur even if there were no formal Endangered Species Act.

E. The South Dakota 1080 Problem

On February 22, 1982, the Secretary of Agriculture for the state of South Dakota testified that Section 7 of the Act had prevented his state from using compound 1080 as a rodenticide to control Prairie Dogs. During his testimony, he admitted he had never heard of the Act's exemption process. It is therefore not surprising that he has grossly overstated the impact of Section 7 on his state rodenticide program.

On July 21, 1978 the Fish and Wildlife Service issued a jeopardy opinion concerning the use of 1080 in prairie dog colonies, the relevant portions of which are attached. That opinion found that while unrestricted use of 1080 could lead to jeopardy, its use would not result in jeopardy:

* The WRC also cites the peregrine falcon experimental population example. We believe that the experimental population amendment discussed by Michael Bean addresses this problem. The Houston toad example, also cited by WRC, is too imprecise to enable us to respond.

"provided EPA develops new label restrictions which would require a precontrol survey of the prairie dog towns to determine the presence of black-footed ferrets and would preclude the use of 1080 in any dog town which contained or was thought to contain ferrets."

We believe that this is an eminently sensible restriction. Ferrets are extremely rare and a precontrol survey would without question lead to a finding of no ferrets in most cases. As has been the case in all examples discussed in this testimony, this example raise no irreconcilable economic and environmental conflicts. If it did, however, South Dakota could seek an exemption from the Section 7 prohibitions.

II. The Act Has Not Adversely Affected Western Water Use

A number of organizations have testified that the Act unduly interferes with western water use. They argue that the Act should contain a provision, similar to Section 101(g) of the Clean Water Act, which prohibits interference by the Endangered Species Act in western water allocation. Such arguments ignore fundamental differences between the Acts as well as eight years of implementation of the Endangered Species Act.

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Western water interests argue that Section 101(g) of the Clean Water Act is designed to ensure that the federal government does not use water quality concerns to justify control over water quantity in the West. While we do not believe such a distinction can or should be made, arguably the West can control water quality using traditional pollution control devices.

The Endangered Species Act, of course, serves an entirely different purpose. It protects species from extinction, including those dependent on water in the West. Thus, unlike the Clean Water Act, where the goals of that Act can arguably be achieved without regulating western water quantity, the Endangered Species Act cannot stop extinctions of water dependent species if there is an inadequate flow of water available to them.

Equally important, there is no economic justification for such extinctions. As previously indicated, there are no examples in Fish and Wildlife Service Region 6, the principal western region, of the Section 7 process either unduly delaying or stopping a project. Fish and Wildlife Service data has not identified a single western water project stopped by the Act.

Even if the Act's provisions prove incompatible with a western water use, the exemption process provides for the completion of any western water project of sufficient economic value.

To conclude, the endangered species Act sets forth a national goal of protecting species from extinction. There is no greater economic reason to drop that goal when western water use is

involved than when any other use is affected. In the final analysis, the Act will not stop any water projects of any real economic value.

Specific Examples - Western Water Problems

The National Audubon Society and the National Wildlife Federation are reviewing the status of western water projects.

Our preliminary analysis reveals that:

- 1) The act has not stopped a single water project.
- 2) Where a water project has the potential of jeopardizing

the survival of species, the Fish and Wildlife Service has approved the project with proper mitigation or enhancement measures.

The Fish and Wildlife Service found no jeopardy for the Windy Gap project in Colorado, for example, after the sponsors had agreed to by-pass 11,000 acre feet of water per year for the conservation of downstream aquatic habitat, primarily for non-endangered trout. Although not intended specifically to benefit endangered species, the Service found that when combined with habitat enhancement and research, the measures ensured that the project would not jeopardize endangered species.

- 3) Where the Service found that it lacked sufficient information to determine whether a project might jeopardize a species, it suggested that the project could be built but that at its conclusion, if research required, the stream flow would have to be enhanced by releases from other projects (Moon Lake and Third Unit of the Craig Station, Colorado project), by by-passes from proposed projects (Windy Gap Project) or by such releases and habitat mitigation (Upalco Unit of the Central Utah Project).

4) Approximately 16 projects on the Colorado and Green Rivers have been delayed by the Act while a study* of the status of several endangered fish proceeded. In virtually all cases, however, as stated by the regional director in Fish and Wildlife Region 6, other environmental laws were also delaying the project. The key study is now complete, however, and any delays should end shortly. Moreover, in all cases the project sponsor could have proceeded to build the project during the study if it were willing to accept the type of alternatives described in example 3 above.

5) It is possible that some projects will be able to proceed only if the project sponsor agrees to maintain stream flows through by-passes or releases from other projects. To date, such requirements have not stopped any project. Should they prove too expensive, the sponsor can seek an exemption from Section 7's requirements.

Throughout the debate of the effect of water projects on water rights, the Fish and Wildlife Service has taken the position that:

The continued existence of the Colorado squawfish, humpback chubs and the bonytail chub will require cooperation and communication between diverse interest groups. Every effort will be made to avoid delaying water development projects because of the need to conserve the endangered fish species. However, there may be some delay, compromises and modifications to maintain certain environmental conditions. (Windy Gap Project Biological Opinion, March 13, 1981.)

* The study was conducted by the Colorado River Fishes Investigation Team established in April 1979. The study is staffed with Fish and Wildlife Service personnel. Other participants are the Utah Division of Wildlife Resources and the Colorado Division of Wildlife.

Thus, the Act has neither stopped nor significantly delayed water projects. The main cause of uncertainty, the status of several fishes studied by the Colorado River Fishes Investigation Team, should be ended by the report from their now completed study.

III. The Act's Coverage of Subspecies and Local Populations Has Strong Public Support and Provides Undeniable Benefits to the Species

The Act defines the term "species" to include any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature. This definition makes it possible to protect local populations of vertebrates even though the species as a whole may not be endangered, thus facilitating the protection of the species by preventing the reduction of the population to a small enough area to endanger the entire species.

The National Forest Products Association (NFPA) and the American Mining Congress seeks amendments to the fact that would eliminate this critically needed flexibility. Under the NFPA amendment, the Secretary could not list a lower taxon (subspecies) as endangered and could list one as threatened only if the Service finds that it would have to list the entire species if it does not protect the lower taxon. The American Mining Congress proposes an even more drastic amendment forbidding even the listing of subspecies.

As is typical of industry's proposed amendments, they have not cited a single reason why they need this amendment. The Fish and Wildlife Service has utilized the Act's flexibility to protect subspecies and local populations mainly with respect to wide ranging birds and mammals like bald eagles, grizzly bears,

sea otters and wolves. Under the industry proposals all of these species would lose their protection under the Act because of comparatively large populations in Alaska and Canada. We believe that the survival of these species should be aided in the lower 48 states. The public supports such help, and the entire species benefits by maintaining its survival throughout its range.

IV. Section 9 of the Act Should Continue to Prevent "Harm" to Species.

Section 9 of the Act makes it illegal to "take" endangered and threatened species of fish and wildlife. "Take" is defined to mean "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

A number of industry representatives seek to remove the word "harm" from the definition of take. They argue that the word "harm" has been extended to private actions which lead to habitat modifications and thus places unacceptable burdens on industry. Again, the facts belie their claim.

The Reagan Administration has just concluded an exhaustive review of the "harm" issue during the course of drafting new regulations defining the word "take." After receiving 382 comments, 30 of which made substantive or analytical analyses, the Fish and Wildlife Service redefined "harm" to read:

An act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding or sheltering.

Although the groups on whose behalf I testify are not entirely satisfied with the definition, we submit that it should not be modified without proof that it is causing harm to industry.

Even prior to the redefinition of harm, Section 9 did not cause industry any significant problems. In the eight years from the passage of the Act until the 1981 redefinition, courts entered only one injunction for a Section 9 habitat destruction case, one which provides only a very limited precedent because the action enjoined threatened to drive an endangered bird into extinction. It thus clearly met the requirement for an injunction that there be irreparable injury.

Although none of the industry groups can cite an example of court action under Section 9, the NFPA cites examples of voluntary, but allegedly costly actions, which they claim their members have had to undertake on private land to avoid harm. The first example is one from Weyerhaeuser Corporation in which Weyerhaeuser claims it has had to protect 900 of its more than 3 million acres in the Northwest to avoid "harm" to Bald eagles. The timber on the land, according to Weyerhaeuser, is worth \$9 million. That figure, however, obviously represents the value of the timber, not Weyerhaeuser's potential profit. Moreover, any such figure should be spread over the life cycle of the forest, 50-80 years we guess, if one is to get a true picture of the "lost economic" value of the land. When profits and forests life cycles are considered, the Weyerhaeuser figure becomes quite small.

Moreover, the bald eagle example is not a legitimate one since eagles are also fully protected by the Bald and Golden Eagle Protection Act. That Act duplicates all restrictions in the Endangered Species Act. Thus, Weyerhaeuser would find no relief from its problem even if this Committee removed harm from the definition of take.

The NFPA also cites costs incurred by companies in protecting red-cockaded woodpeckers. One company states it has set aside 155 acres of timber valued at \$115,000 per year, another company states that it is spending \$86 to \$150 per acre per year to protect the woodpeckers while also producing timber.

We, of course, applaud the effort of these companies and from the NFPA letter cannot tell if these companies are complaining about their costs. Many companies, such as Westvaco, developed endangered species programs before the Act passed in 1973, and many have received excellent publicity for their efforts. A copy of a recent South Carolina newspaper story about Westvaco is attached.

As is obvious from the NFPA description, timber companies can develop plans to protect the woodpecker while still maintaining their profitability. They can seek, if they choose, an enhancement permit under Section 10 of the Act to enable them to produce timber in red-cockaded woodpecker habitat as part of a management scheme like the one described in the NFPA letter. We support the development of such plans and the granting of permits in appropriate situations. This committee will hear testimony today from the sponsors of a housing project on the San Bruno mountains in California detailing their experience with a Section 10

permit.

Nothing in the NFPA testimony establishes that the definition of harm is causing unacceptable costs for their industry. The costs that are incurred are incidental to removing the socially and environmentally negative effects of species extinction. Nevertheless, we see no reason why businesses, which incur costs to protect endangered species, should not be entitled to tax relief such as industry receives for the installation of pollution control equipment. The NFPA appears to be proposing such relief, but it has not yet produced a bill. The groups on whose behalf I am testifying support such relief in the abstract providing it is sought in a separate piece of legislation. We look forward to seeing a draft of the NFPA bill.

The final example of a Section 9 problem involves a claim by Northeast Nuclear Energy Company that the taking provision in the Act led EPA to deny a National Pollutant Discharge Elimination System permit authorizing discharges in the Connecticut River from a proposed nuclear power station at Montague, Massachusetts. A review of the evidence, however, shows that the plant sponsors stopped it for cost reasons, that the Endangered Species Act issue was a very minor one at best, that it was of little or no concern to environmental groups, and that EPA's comments were only preliminary.

The alleged Endangered Species Act problem concerned possible mortality to eggs and larvae of the shortnosed sturgeon. According to an EPA letter dated April 27, 1978, a copy of which is attached, that is one of five issues which remained unresolved because of insufficient data.

EPA officials stated in a discussion last week that there had been sighting of only one or two sturgeon eggs above the plant. At the time of the letter, species status studies were being undertaken, and the question of the effect of the sturgeon on the permit had been certified to EPA's Office of General Counsel for advice. Before EPA's lawyers could rule, Northeast Utilities cancelled the plant for economic reasons totally unrelated to the species.

As of the time of cancellation, no biological opinion had been issued. Both the NRC and the utility company wrote the National Marine Fisheries Service withdrawing their request for such an opinion. Moreover, the sturgeon issue was of little concern to environmental groups. Attached is a letter from the Connecticut River Watershed Council, the principal opponent of the plant, setting forth the basis for their opposition but never mentioning the Endangered Species Act.

Like many utilities, Northeast is suffering great financial strains from its efforts to build nuclear powerplants, all of which are in financial trouble or in the process of being cancelled. The facts do not support the company's efforts to make the Act a scapegoat for its problems.

Conclusion

A careful and dispassionate analysis of the Act reveals that criticisms are based on either a misunderstanding of the Act, a misstatement of the facts, or a belief that the Act is not working if it results in any economic costs, even if those costs do not stop a project from continuing profitably. Rather than

raising undue costs to society, the Endangered Species Act has succeeded remarkably well in protecting the environment without seriously disrupting economic activity.

Thank you.

Attachments

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ATTACHED

PACIFIC ISLAND ADMINISTRATOR

I. Listed below are summaries of jeopardy biological opinions issued through or by the Honolulu Office. Data on these opinions is given in the following format:

- a. Consultation Number
- b. Consulting Agency
- c. Project Description and Location
- d. Point of Jeopardy
- e. Monetary Magnitude of Project
- f. Resolution

1.
 - a. 1-2-78-F-88
 - b. ASCS (USDA) - Forestry Incentive Program
 - c. Keauhou-Kilauea, Hawaii; Establishment of a koa plantation on private lands funded, in part, by the ASCS
 - d. Establishment of a monotypic, single age-class stand would jeopardize endangered forest birds and one listed plant
 - e. Less than \$1,000,000
 - f. The funding applicant selected an alternate site for planting.
2.
 - a. 1-2-78-F-86
 - b. COE
 - c. Lake Susupe - Chalan Kanoa Flood Control Project, Saipan; Design and construction of a flood control project
 - d. Water level fluctuations effects on endangered birds; effects of construction on nesting
 - e. \$1-10 million (about \$3 million)
 - f. Mitigation in the form of habitat enhancement was incorporated into the project design; this removed jeopardy.
3.
 - a. 1-2-79-F-43
 - b. USFS (USDA)
 - c. USFWS Permit application for forest bird research on 13 species to be done by USFS; Hawaii, Oahu, and Kauai, Hawaii
 - d. Some of the species involved would be jeopardized by the permit activity (capture and banding)
 - e. Less than \$1 million
 - f. Number of species investigated was reduced.
4.
 - a. 1-2-79-F-107
 - b. COE
 - c. Lava Flow Control Project, Island of Hawaii, Hawaii
 - d. Construction of flow barriers would decrease habitat of various listed forest birds
 - e. \$1-10 million (about \$2 million)
 - f. Diversion barriers would be constructed only when flow damage to property is forecast, an alternative presented in the opinion
5.
 - a. 1-2-80-F-13
 - b. COE
 - c. Application for a permit to fill a wetland for a radio tower near Chalan Piao, Saipan

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- d. Collision with the antenna and guy wires would jeopardize the Marianas mallard
 - e. Less than \$1 million
 - f. For reasons other than endangered species, the application was withdrawn.
- 6.
- a. 1-2-80-F-15
 - b. U.S. Army
 - c. Routine Army training activities at the Pohakuloa Training Area, Island of Hawaii, Hawaii and impacts on three listed plants.
 - d. Fires possibly started by training activities may destroy the plants in question
 - e. Less than \$1 million
 - f. Construction of firebreaks, development of stronger firefighting capability, and stricter enforcement of Army fire regulations were implemented.
- 7.
- a. 1-2-81-F-204
 - b. COE
 - c. Application for a permit to fill wetland; construction of a marine shrimp farm, Oahu, Hawaii
 - d. Destruction of endangered waterbird habitat.
 - e. Less than \$1 million
 - f. Minor changes in the project design eliminated the jeopardy situation.
- 8.
- a. 1-2-81-F-207
 - b. EPA
 - c. Construction of the Wailuku-Kahului Wastewater Treatment and Disposal System on Maui, Hawaii
 - d. Use of injection wells might possibly raise the water level in nearby waterbird refuge, flooding nests and, thereby, jeopardizing listed species.
 - e. Less than \$1 million
 - f. A water level monitoring program was designed into the project.
- 9.
- a. 1-2-81-F-211
 - b. U.S. Army
 - c. Training exercises at the Pohakuloa Training Area, Island of Hawaii, would jeopardize three listed plants and one listed bird.
 - d. Mechanical destruction and fires may damage plants and the habitat of the listed bird.
 - e. Less than \$1 million
 - f. Proper fire control and orders against destruction of vegetation removed jeopardy.

- II. Outline of conflict cases; reasons for conflict and resolutions.
There have been no irresolvable conflicts. Those projects that appeared to be the least compatible with listed species (1-2-79-F-107 and 1-2-80-F-13) were not begun for reasons other than endangered species.
- III. List of all projects delayed by the Section 7 process:
There were no projects delayed solely because of Section 7 conflicts.
Long delays in some projects (with matching delays in Section 7 resolution) were due to factors other than listed species concerns.

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REAUTHORIZATION OF THE ENDANGERED SPECIES ACT
SECTION 7 CONSULTATION STATISTICS
1979 to 1981

(26 February 1982)

The following information is summarized from data compiled after a 2-month review (completed February 1982) of all Regional and Washington Office consultation files. This analysis replaces all earlier documents summarizing consultation activity for the fiscal years 1979 to 1981.

I. Consultation totals for all Regions, including the Washington Office:

A. FY year	Informal Consultations	Formal Consultations/ No jeopardy	Jeopardy
1979	1,585	980	858 87
1980	2,374	729	647 68
1981	<u>3,535</u>	<u>483</u>	<u>422</u> <u>30</u>
Totals:	7,494 (1.)	2,192 (2.)	1,927 (3.) 185 (4.)

1. Informal consultation does not result in a biological opinion. When agencies notify the FWS early in their planning process, often formal consultation is avoided, as indicated by the yearly (ave. 30%) increase in the number of informal consultations with the corresponding yearly (ave. 30%) decrease in the number of formal consultations and jeopardy opinions (see graph page 5).
2. 90 formal consultations were cancelled or withdrawn with no endangered species problems nor impacts to the projects. 38 consultations are continuing as of January 1982 (see page 3).
3. Of the 1,927 no jeopardy biological opinions, 493 (26%) also included activities that "would promote the conservation of listed species."
4. Of the 185 jeopardy biological opinions, 54 (29%) also included specific project activities that "are not likely to jeopardize" listed species. The purpose of the Act is to inform the public and project sponsors that a problem exists. Alternatives, suggested through consultation, offer project sponsors a means of proceeding with the project while avoiding further impacts to the species or habitat (see page 4).

B. Average consultation time for all formal opinions (in days):
(where data was available)

<u>FY year</u>	<u>Number/No jeopardy</u>		<u>Number/Jeopardy</u>	
1979	713	56.4 days	77	104.9 days
1980	629	53.5 days	68	111.2 days
1981	430	<u>44.7 days</u>	28	<u>56.3 days</u>
Average time:		52.4 days		99.8 days

Average time for 1,845 consultations: 59.7 days

1. 278 consultations (150) were extended beyond the 90-day period to complete formal consultation. In all cases consultation was extended: (1) at the agencies request; (2) to gather more information; or (3) because of the complexity of the project. All extensions were mutually agreed to between the FWS and the consulting agency. There are 2 known exceptions where the consultation was misplaced.

a. Number of consultations extended beyond the 90-day period:

<u>FY year</u>	<u>no jeopardy</u>	<u>jeopardy</u>
1979	79	26
1980	96	31
1981	<u>39</u>	<u>7</u>
Total:	214	64 = 278

214 (77%) resulted in no jeopardy decisions with no project problems

- b. Average extension beyond the 90-day consultation period required to complete formal consultation for those totalled in part a. (in days):

<u>FY year</u>	<u>No jeopardy</u>	<u>Jeopardy</u>
1979	89.0	119.3 days
1980	71.1	81.9 days
1981	<u>42.1</u>	<u>37.1 days</u>
Average:	71.9	93.3 days

105 (38%) were completed within 2 weeks of the end of the 90-day period

II. Formal consultation: Analysis of totals from part I

A. Inter-Agency consultation: all non-Interior Department Agencies and Interior (other than Fish and Wildlife Service)

<u>FY year</u>	<u>Formals</u>	<u>Cancelled</u>	<u>Continuing</u>	<u>No Jeopardy</u>	<u>Jeopardy</u>
1979	377	23	2	290	68
1980	362	20	19	302	57
1981	<u>205</u>	<u>13</u>	<u>17</u>	<u>157</u>	<u>22</u>
Totals:	944	56 (1.)	38 (2.)	749 (3.)	147 (4.)

Intra-Service consultation: Fish and Wildlife Service, including Wildlife Permit Office (research and import/export permits)

<u>FY year</u>	<u>Formals</u>	<u>Cancelled</u>	<u>Continuing</u>	<u>No Jeopardy</u>	<u>Jeopardy</u>
1979	603	16	0	568	19
1980	367	12	0	345	11
1981	<u>278</u>	<u>6</u>	<u>0</u>	<u>265</u>	<u>8</u>
Totals:	1,248	34 (1.)	0 (2.)	1,178 (3.)	38 (4.)

1. Consultations cancelled because the agency/person (wildlife permit) withdrew the request or it was determined informally that there was no effect to listed species; therefore, no consultation was necessary.
2. Consultations continuing because they were recently initiated (17), or consultation was extended by mutual agreement to complete further study (21) to assess project impacts and develop recommendations or alternatives that allow projects to proceed while avoiding impacts to the species or habitat. Consultation will then be completed by the Service.
3. As far as is known, all projects receiving a no jeopardy biological opinion proceeded to completion; there were no associated endangered species conflicts in those cases.
4. Jeopardy totals: (see page 3)

III. Formal consultation: Analysis of jeopardy data from totals in part II

- A. Jeopardy opinions rendered, FWS' suggested alternatives accepted, and the project proceeded: 97
- B. Jeopardy opinions rendered, agency decision unknown, however the project proceeded: 72
- C. Jeopardy opinions rendered, suggested alternatives rejected, and the project proceeded: 1
 - 1. The EPA recently registered a pesticide (Lorsban) prior to completion of formal consultation (jeopardy with alternatives).
- D. Jeopardy opinions rendered, however discussions continuing concerning the FWS' suggested alternatives: 7
 - 1. Warner Valley reservoir (Utah), discussions continuing with BLM, FWS, and the project sponsors to develop alternatives.
 - 2. Road construction for a timber sale in Clearwater NF (Idaho), discussions continuing with FWS and FS over suggested alternatives.
 - 3. Wildcat reservoir (Colorado), after refusing the exemption procedure, now awaiting resolution of litigation. FWS is reviewing the jeopardy opinion relative to the new whooping crane management plan. (COE)
 - 4. North Fork Flathead Road improvement (Montana) awaiting EIS. (FHWA)
 - 5. Prairie Du Chien barge facility (Wisconsin), other problems besides ES. Another facility substituted, however discussions continuing. (COE)
 - 6. Oil waste water disposal facility (California), alternatives accepted, however still negotiating over a separate BLM-required alternative.
 - 7. Pittston Oil refinery recently received an EPA permit to proceed with the project, however this has resulted in litigation.
- E. Jeopardy opinions rendered, project cancelled or withdrawn: 8
 - 1. Powell River (Tennessee), gravel (404) permit. Applicant withdrew the application during discussions over alternatives (reason unknown). (COE)
 - 2. Occidental Petroleum oil drilling (Calif.). One well was drilled without authorization from BLM. After the opinion was rendered, O.P. rejected the alternatives and abandoned plans for another well; reason unknown.
 - 3. Mays Landing offshore oil facility (Calif.). The applicant refused to conduct an oil spill risk analysis (suggested alternative), so COE denied the permit. An alternative facility was used; no consultation required.
 - 4. COE application to fill a wetland (Saipan) cancelled for reasons other than endangered species after the opinion was rendered.
 - 5. Ford dealership construction in vernal pool area (Calif.). Accepted the alternatives, however the project was dropped because of funding problems due to slump in auto industry. (COE)
 - 6. Residential housing development in the vernal pool area (Calif.). Some development begun during consultation, however slump in housing industry stalled the project after delay over discussions on alternatives. (VA)
 - 7. Lava flow control study (Hawaii) was cancelled because the feasibility study indicated that the project was not economical. (COE)
 - 8. Red River Basin chloride control project (Oklahoma), consultation reinitiated, however project dropped for economic reasons. (COE)

OPTIONAL FORM NO. 10
JULY 1973 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

TO : Office of Endangered Species, Washington (AFA) DATE: January 7, 1982
Attention: Barry Mulder

FROM : Area Manager, Billings (SE)

SUBJECT: Reauthorization - Testimony of Western Regional Council

Pursuant to the Associate Director's December 21, 1981, memo the following is provided to assist you in preparing a response to the testimony of the Western Regional Council regarding the Chicago Peak consultation and lawsuit. First, a chronological listing of events involving this case may help set the record straight.

May 21, 1979: The Forest Service requested formal consultation on ASARCO's proposal to drill three to six exploratory drill holes during the 1979 operating season on Chicago Peak within the Cabinet Mountains Wilderness.

August 8, 1979: The FWS issued a "no jeopardy" biological opinion. The opinion recommended that (1) the Forest Service adopt a "no firearms" policy for ASARCO employees while on duty, and (2) the Forest Service maintain the authority to implement an immediate shut down should a grizzly bear den be located in which project activities would interfere with denning attempts. No additional restrictions were recommended or required by the FWS.

During the course of this consultation, ASARCO began drilling in an area outside the Wilderness where snow-melt allowed access and the Forest Service determined there would be "no affect" on the grizzly bear. After the August 8, 1979, biological opinion was issued, ASARCO moved their operation to their claim block within the Wilderness.

March 31, 1980: The Forest Service requested formal consultation on ASARCO's proposal to continue their 1979 geologic core drilling program over a period of approximately 20 months (five months each summer) from May 1980 to December 31, 1983. Approximately 36 drill holes on 22 sites per operating season (four seasons) was the anticipated level of activity.



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June 13, 1980: The FWS issued a "jeopardy" biological opinion. The opinion contained an alternative (a compensation plan) that would preclude jeopardy which was accepted and implemented by the Forest Service. Only one provision of the compensation plan affected ASARCO's plan of operation. That provision reduced the period of operation (June 1 to October 31) as proposed by ASARCO and the Forest Service to June 1 through September 30. The other provisions of the compensation plan affected only Forest Service actions and involved the rescheduling of some timber sales and establishing road closures.

September 26, 1980: The Sierra Club, Defenders of Wildlife, and Western Sanders County Involved Citizens filed before the U.S. District Court for the District of Columbia, a complaint for declaratory judgement and injunctive relief enjoining the defendants from permitting ASARCO to continue with its drilling program. This case was argued before Judge Gesell of the D.C. District Court on March 6, 1981.

April 15, 1981: Judge Gesell denied the plaintiff's motion for summary judgement. The Court concluded that "the defendants have met their burdens under both the ESA and NEPA, that the decision to approve ASARCO's drilling project was not "arbitrary and capricious" . . ." The decision is presently under appeal by the plaintiffs. The Office of the Solicitor has the complete administrative record for this consultation and case. During this litigation, ASARCO continued the exploratory drilling program.

This project was discussed in the testimony and also in the case history presented in the Appendix. Throughout this testimony it is alleged that the Endangered Species Act was used as a bureaucratic or environmental ploy to delay or stop a project when in fact there was no ESA issue, or if there was, the process resulted in no benefit to the species. Quite the contrary, however, we believe there was a very legitimate concern that the process worked well by allowing the exploratory drilling to be properly designed and to proceed with an acceptable level of impact, and had Section 7 consultation not been required, there would have been severe impacts to the grizzly bear population in the Cabinet Mountains.

I would now like to address some of the statements made in the testimony, many of which are an incomplete or a distortion of the facts, and then discuss the case history in the Appendix.

TESTIMONY

Page 9, Para. 1: The statements are made that under Section 7(a)(2) Federal agencies must insure their actions do not jeopardize a species or its critical habitat, the steps in the consultation process are not

well defined, and the process does not allow timely input by industry. An important aspect to remember is that Section 7(a)(2) is the final protective measure. Section 7(a)(1) imparts a greater responsibility for all Federal agencies shall . . . utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation (emphasis added) of endangered species and threatened species.

Because of the amendments to the Act, and the lack of current regulations, it may be valid to say in some instances that the steps in the consultation process are not well defined. The Chicago Peak consultation was fairly straight forward and not at all hard to understand if there is a genuine desire to conserve the species. These steps being, design the project as well as possible and determine if it may affect the species. If so, request formal consultation; if not, proceed. The statement regarding timely input by industry is difficult to interpret. The agencies must basically respond to industry planning and decision making and the problem, if there is one, is the reverse - agencies having timely input. In this project FWS and FS were in almost continuous contact, and I would presume that FS had routine liaison with ASARCO.

Page 9, Para. 3: The statements are made that the West's compliance burden would be greatly reduced if Section 7 was limited to projects requiring an EIS and that only "significant" portions of critical habitat be considered. This is probably true as would the "burden" of the North, South, and East. However, the protection of the species and their conservation would be significantly reduced as well. The deciding factor is (and rightly so) the impact on the survival and recovery of the species, not that it is a "major Federal action significantly effecting the quality of the human environment". In this particular case (Chicago Peak) it was determined that the exploratory drilling permit was not a major Federal action, yet the consequences to the grizzly bear could have been quite severe.

While critical habitat has not been identified for the grizzly bear, and therefore not an issue in this consultation, it is very doubtful that the consultation would have progressed any differently or the conclusion changed had there been critical habitats. The level of impact to the species and its habitat is always considered in reaching a conclusion. In reaching a decision to consult, there was a determination that there was an impact. The level of impact must then be analyzed to determine if it is sufficient to jeopardize the survival and recovery of the species. There are numerous projects which have received "no jeopardy" opinions which still have had adverse effects on listed species.

It is recommended that it would assist industry if only "significant" portion of critical habitat be considered. This is an interesting anomaly. It would seem that habitat determined to be CRITICAL would imply some significance.

Page 10, Para. 1: It is stated that three serious constraints on the project were imposed by the FWS. Three constraints were imposed - only one of which applied to ASARCO. The other two applied to Forest Service timber management and road closures.

Page 10, Para. 1,2,3: Statements are made that the project area was only in the "range" of the grizzly and not any "critical" habitat, that in 26 years of record keeping there have been no sightings in the area of exploration, and an exhaustive study confirmed past research that there is no documented evidence that one grizzly bear has fed, denned, or been in the project area. This is a blatant misrepresentation of facts, and epitomizes the authors' apparent lack of knowledge about the events, grizzly bears, bear habitat, and the Cabinet Mountains.

The grizzly has undergone a 99 percent reduction in numbers and range during this century. That's why it's listed. The grizzly typically occurs in low densities and requires large home ranges (typically 100-200 square miles) and requires a diversity of habitats to meet its annual biological needs ranging from low elevation spring ranges to high elevation feeding and denning habitat. High elevation feeding and denning habitat occurs within the project area and within the claim block.

Grizzly bears historically occurred in the Cabinet Mountains, there is documented evidence (1981) of grizzlies and their sign in the "project area" (to be discussed later) and the reason there isn't more evidence is that (1) there are very few bears, and (2) no one has looked very hard. No detailed biological study was carried out by ASARCO as stated (Page 10, Para. 2) and this is one reason the consultation was particularly difficult.

Page 10, Para. 4: It is stated that the ESA is often used to delay projects, increase costs and open a project to litigation and cites the ASARCO case as a perfect example. This summary is a perfect example of faulty presentation of information to reach biased conclusions. It is further stated that these actions do not help the species, adversely affect industry, and it is the species which is ultimately hurt. The classic coup de grace is that the ESA is severely weakened. All these things may be true, but they are not true in the ASARCO case. Section 7(a)(1) was not met. Were it not for Section 7(a)(2) there would have been more adverse impacts to the grizzly.

The Act may well be weakened because of the ASARCO case, not because of the Section 7 consultation process but rather by a lack of desire or commitment to do those things necessary to conserve threatened and endangered species.

CASE HISTORY

Page 12, Para 3: The statement is made that the FWS did not approve ASARCO's 1979 proposal until September 1 of that year. According to the statement, the Forest Service approved the plan of operation on April 2, 1979, however, they did not initiate formal consultation with the FWS until May 21, 1979. The FWS rendered a biological opinion on August 8, 1979, well within the 90-day period allowed under the Endangered Species Act as amended. The current method of initiating consultation with Area Managers rather than Regional Directors has helped substantially to reduce the turn around time on consultations. It should also be noted that the Section 7 Team in Billings at that time (2 biologists) also completed six other formal consultations and numerous informal consultations during that time period. It is interesting to note that all other planning and review is considered normal, and Section 7 planning and review is considered a delay.

Page 13, Para. 2: Contrary to what is stated, the FS permit discussed here was not conditional on the 1979 plan of operation and biological opinion, but rather the four year operating plan and biological opinion issued in June 1980. Additionally, that opinion included only one constraint affecting ASARCO (that of reducing the operating period from five to four months). The other 61 stipulations were originated by the Forest Service. Two other FWS stipulations affected Forest Service timber harvest and road closure policies.

Page 13, 14: The case is presented that grizzly bears in the Cabinet Mountains are a figment of someone's imagination, that the ASARCO project will involve some minuscule piece of land (one-half acre) and that FWS required ASARCO to perform some exhaustive and expensive research project which found nothing.

After reading Dr. Tate's testimony and the case history of ASARCO's exploratory project, it is evident that Dr. Tate and the author of the case history have little knowledge about grizzly bear biology. These documents contend that the ASARCO claim group makes up only 0.26 percent of the entire Cabinet-Yaak Ecosystem and that ASARCO's activities only impacted one-half acre. They fail to recognize, however, that grizzly bears and other wildlife are displaced not only from the claim block but from all drainages that are impacted by helicopter disturbance when work crews are flown to and from work sites and drill rigs moved from drill site to drill site. The FWS June 13, 1980, biological opinion identified

19 major drainages within and adjacent to ASARCO's claim block. The number of drainages impacted simultaneously by the ASARCO project and other Forest Service major activities (primarily timber sales) over the four year project period ranged from six to 12. From this analysis, we concluded that the extent of displacement from seasonally important ranges and denning habitat would preclude grizzly bears from meeting their biological requirements. The limited availability of spring range and denning habitat in the Cabinet Mountains makes these habitat components extremely important to the grizzly. Displacement from these areas during their period of use can be expected to result in increased mortality rates and decreased reproductive rates -- impacts that the Cabinet-Yaak grizzly bear population cannot withstand without jeopardizing its continued existence.

The assertion that the only area impacted is the specific areas occupied by the drilling rigs (one-half acre) is ludicrous.

The case history stresses the point that Forest Service records do not include observations of grizzlies in ASARCO's claim block. It should be recognized that the Cabinet Mountain grizzly population is extremely low -- one of the reasons it is threatened with extinction. Because grizzlies characteristically occur in low densities, have large home ranges often exceeding 100 to 200 square miles, and generally avoid people, a large number of observations from a site specific location such as the ASARCO claim block cannot be expected -- particularly when there has never been any grizzly bear research conducted in this area. The case history fails to acknowledge that the Forest Service identified in their biological evaluation 28 observation reports of grizzlies or their sign in the Cabinet Mountains, and Dr. Erickson has since observed four grizzlies approximately four to five miles from ASARCO's claim block during one reconnaissance flight.

Reference is made to a two year trapping effort by the Border Grizzly Project without success. In order to put a better perspective on this statement, the trapping effort only involved an 11-day period in 1979 beginning on October 3. In 1980 trapping was begun on 7 June and continued until 8 November. One grizzly, a yearling accompanied by its mother, was captured but escaped before it could be tranquilized. Since then, during a reconnaissance flight in September 1981, Dr. Erickson, who is referenced on pages 14 and 15, observed four grizzlies approximately four to five airline miles to the southeast of ASARCO's claim block. These bears were observed in one of the drainages where FWS required modification of FS timber programs and seasonal road closures. This information would lead one to the conclusion that (a) there are currently grizzlies within a very short distance of the claim block and within the project area of influence, (b) this population is in a very precarious

position, (c) there are important seasonal habitats necessary for bear survival within the project area of influence, and (d) these bears would utilize the area if they were not excluded by intense human activity (exploratory drilling and helicopter traffic).

Finally, FWS did not require ASARCO to conduct any bear research as a condition of obtaining their exploratory drilling permit, and ASARCO has not conducted any research project. We understand that Dr. Al Erickson has been retained by ASARCO, but has conducted no research project as purported.

Page 14, Para. 2: The area of influence of the ASARCO project is small relative to the grizzly range in Montana. However, the Cabinet population is in a precarious condition, and by no means expendable. ASARCO has apparently hired Dr. Al Erickson to conduct bear research. This was apparently ASARCO's decision and not a condition of the exploratory permit. The alleged expensive search for bears has not resulted in any research proposal and after three years of exploratory drilling not resulted in one bear research field crew in the woods. We would presume this is in preparation for developing and mining in the Cabinet wilderness. Regarding the lawsuit, FS and FWS were the defendants in the case. ASARCO intervened in the case at their own discretion. Their legal expenses may be unfortunate, but the alternative is not allow the public the opportunity to settle perceived illegalities in our court system.

Page 14, Para. 2: It is stated that the Act has been to delay and possibly even stop a legal and legitimate project. However, the small delay was not because of procedures per se. It was necessary to insure that a project with great potential to very adversely impact a species threatened with extinction was properly designed and executed. It was not stopped. Dr. Tate concludes, "whether its use has been in the best interests of the species involved, however, is questionable." This may be true, however, only time will tell. It is certainly true that the invasion of bear habitat is not in the best interests of the bear. With less than 1,000 bears in three disjunct populations, there seems little margin for error.

Wally Frank

enclosure

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

WASHINGTON, D.C. 20240

In Reply Refer To:
FWS/OES 375.4

JUL 21 1978

Mr. Douglas M. Costle
Administrator, Environmental
Protection Agency
401 M Street SW
Washington, D.C. 20460

Dear Mr. Costle:

This responds to your April 14, 1978, request for consultation under Section 7 of the Endangered Species Act of 1973 on the use of the toxicant sodium monofluoroacetate (commonly known as Compound 1080 or simply 1080), relative to its impact on Endangered or Threatened species. This represents the biological opinion of the U.S. Fish and Wildlife Service (FWS) in accordance with the Section 7 "Interagency Cooperation Regulations" (50 CFR 402, 43 FR 870).

The following listed species were considered in this consultation as most likely to be exposed to Compound 1080:

- San Joaquin kit fox (*Vulpes macrotis mutica*)
- Black-footed ferret (*Mustela nigripes*)
- Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*)
- Salt marsh harvest mouse (*Reithrodontomys raviventris*)
- California condor (*Gymnogyps californianus*)
- Aleutian Canada goose (*Branta canadensis leucopareia*)
- Bald eagle (*Haliaeetus leucocephalus*)
- Arctic peregrine falcon (*Falco peregrinus tundrius*)
- American peregrine falcon (*Falco peregrinus anatum*)
- Santa Barbara song sparrow (*Melospiza melodia graminea*)
- San Clemente sage sparrow (*Amphispiza belli clementeae*)
- San Clemente loggerhead shrike (*Lanius ludovicianus mearnsi*)

In response to your request for Section 7 consultation, I appointed a consultation team to assist me in determining whether the use of 1080 is likely to jeopardize the continued existence of Endangered or Threatened



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species or result in the destruction or adverse modification of their Critical Habitats. The team was comprised of Messrs. Robert Jacobsen, David Watts and Ronald Nowak of the Office of Endangered Species and Mr. William Spalsbury of the Division of Animal Damage Control.

On June 21, 1978, the consultation team met with your representatives to discuss the use of 1080 and its effects on Endangered or Threatened species and their habitats. In evaluating the use and effects of 1080, the team reviewed information provided by the Environmental Protection Agency (EPA) along with numerous reports, publications and correspondence from knowledgeable sources on the impact of the toxicant on listed species. The team also contacted various state fish and game agencies as well as personnel in the regional and area offices and research centers of the Fish and Wildlife Service and Recovery Team personnel. Copies of pertinent reports and documents are included in an administrative record maintained at the Office of Endangered Species and are incorporated by reference.

Based on the information provided by EPA, it is our understanding that 1080 is currently registered for nationwide use under a Federal registration. However, only California, Nevada and Colorado have state registrations for the toxicant and these are the only states currently using the chemical. Therefore, this biological opinion applies only to listed species found in those three states. The chemical is registered for use by governmental agencies and experienced pest control operators for the control of gophers, ground squirrels, prairie dogs, field and commensal rodents.

After careful review of the findings by the consultation team, it is my biological opinion, subject to the conditions identified below, that the use of 1080 is not likely to jeopardize the continued existence of Endangered or Threatened species or result in the destruction or adverse modification of their Critical Habitats. However, EPA is not relieved of its continuing responsibility to review its activities and programs in light of the obligations of Section 7 and to reinstate this consultation if new information becomes available which identifies that the use of 1080 may affect listed species or their habitats, the use or restrictions on use are subsequently modified, or a new species is listed that may be affected by its use.

Sodium monofluoroacetate is a white, odorless, powdery, fluoro-organic salt similar in appearance to flour, powdered sugar, or baking powder. It is essentially tasteless, having only a mild salty, sour, or vinegar taste to some individuals. The compound is hygroscopic, highly soluble in water, but relatively insoluble in organic solvents such as kerosene, alcohol, or in animal and vegetable fats and oils. Sodium monofluoroacetate is

absorbed through the gastrointestinal tract, open wounds, mucous membranes and the pulmonary epithelium. It is not readily absorbed through intact skin.

Animal species vary in their susceptibility to Compound 1080 with carnivores and rodents showing some of the lowest LD50's and amphibians showing the highest. It is generally agreed that secondary poisoning can be demonstrated with sodium monofluoroacetate. However, simple dilution and the fact that animals can metabolize it to nontoxic metabolites and/or excrete a large quantity of a dose prior to death (if the dose is approximately an LD50) reduces the hazard of acute poisoning via secondary sources considerably.

Compound 1080 is applied usually in two ways: (1) by dissolving in water and injecting the solution into meat bait and (2) impregnating grain with the dissolved toxicant. These baits are then distributed in the area planned for control.

A summary of the biological data and considerations used in evaluating the effects of 1080 on listed species or their habitats is provided below.

Commensal Rodent Use

Compound 1080 has been effectively used to control commensal rodents in and around human structures. This use has been beneficial to man in reducing rodent damage and risk of disease. There is currently no evidence to indicate that this use of 1080 has caused any mortality in Endangered species. Therefore, it is my biological opinion that the continued use of 1080 for commensal rodent control is not likely to jeopardize the continued existence of Endangered species provided label restrictions are strictly followed and dead carcasses are disposed in the manner prescribed.

Fish

Although Compound 1080 is soluble in water, there is no evidence to indicate that it is toxic to fish. Because 1080 is used primarily for rodent control, it is not likely that it would be introduced into water courses inhabited by listed species. Therefore, it is my biological opinion that the use of 1080 is not likely to jeopardize the continued existence of Threatened or Endangered fish species.

Mammals

A considerable amount of research has been done on the effects of 1080 on mammals and the LD50 for a number of species is well documented. Because of their variety of food sources, mammals are likely to be

affected by both primary and secondary poisoning. Under existing use restrictions, the following listed mammals are most likely to be exposed to 1080.

San Joaquin Kit Fox (*Vulpes macrotis mutica*)

The San Joaquin kit fox was listed as Endangered species in the Federal Register on March 11, 1967. Critical Habitat for this species has not yet been determined. The San Joaquin kit fox is small in stature with an average body length of 20 inches, tail length of 12 inches and weight of 4 to 5 pounds. Formerly ranging over most of the plains and the low foothills of the San Joaquin Valley its current distribution extends from the Techachapi Mountain foothills surrounding the southern end of the San Joaquin Valley, north along the foothills of the western part of the valley almost to Los Banos and on the eastern edge of the valley north to approximately 20 miles south of Porterville.

Basically nocturnal, the kit fox feeds on small mammals, birds, reptiles, amphibians and rodents. Although they have been observed eating carrion, it is not a major food source as once believed. Basically adapted for the desert shrub biome, kit fox use their dens all year long. Loss of suitable habitat appears to be the limiting factor for the kit fox.

Although Compound 1080 has been used extensively in the known range of the San Joaquin kit fox, no kit fox mortality can be directly related to the use of the compound. Laboratory studies have shown that secondary poisoning through ingestion of a ground squirrel killed by 1080 has killed a similar non-Endangered subspecies of the kit fox. Therefore, in light of the possibility of secondary poisoning, it is my biological opinion that the use of 1080 is not likely to jeopardize the continued existence of this species provided EPA develops new label and use restrictions which would reduce the likelihood of exposing the kit fox to 1080. Before new label restrictions become effective, EPA must reinitiate Section 7 consultation. We have enclosed a map of the known distribution of the San Joaquin kit fox for your use.

Black-footed Ferret (*Mustela nigripes*)

The black-footed ferret was listed as an Endangered species on March 11, 1967. The historic range included the Great Plains from southern Canada to Texas and Arizona, almost always in association with prairie dog towns. The ferret has always been considered rare, but in this century it has apparently undergone a decline which makes it probably North America's rarest mammal. Scattered sightings are reported each year from various parts of its range, but it is usually not possible to positively verify their accuracy. Thus no map can be constructed of the ferret's current range and no Critical Habitat has been determined.

Available evidence indicates that this medium-size member of the weasel family depends on prairie dog burrows for shelter and rearing of young and that prairie dogs are its principal food, although it also consumes other rodents inhabiting the towns. Ferrets are secretive and nocturnal, making observation of their behavior difficult even when they are known to be present in a town. The primary factor in their decline has most likely been the steady reduction in their available habitat because of overall land use changes on the prairies and the specific reduction of prairie dog towns. It is estimated that prairie dog towns now occupy less than 2 percent of their original range. Any dog town within the ferret's historic range can be considered to potentially harbor ferrets until appropriate surveys have been conducted to attempt to confirm or rule out their presence. The Fish and Wildlife Service has a policy in its own Animal Damage Control activities of conducting precontrol surveys, using current state-of-the-art techniques, prior to undertaking control. The Service considers zinc phosphide to be the preferable control agent, when the presence of ferrets is possible, because of its low hazard to the ferrets.

There is no direct evidence to indicate that there has been secondary poisoning of ferrets from use of Compound 1080. The exact toxicity of 1080 to ferrets is not known; the related mink (*Mustela vison*) and European ferret (*Mustela putorius*) are quite sensitive to 1080, with the LD50 being 1.0 mg/kg and 1.41 mg/kg, respectively. Furthermore, the great rarity of the black-footed ferret makes any accidental mortality a serious occurrence.

The Service's experiences with zinc phosphide indicate that it is an effective and safe alternative to 1080 for prairie dog control. Therefore, it is recommended that EPA remove the registration for the use of 1080 on prairie dogs in Colorado. Should this not be feasible, it is recommended that EPA develop new label restrictions which would require a precontrol survey of the prairie dog towns to determine the presence of black-footed ferrets and would preclude the use of 1080 in any dog town which contained or was thought to contain ferrets. Provided one of the above recommendations is adopted by EPA, it is my biological opinion that the use of 1080 is not likely to jeopardize the continued existence of the black-footed ferret. Before these new restrictions become effective, EPA must reinstitute Section 7 consultation.

Morro Bay Kangaroo Rat (*Dipodomys heermanni morroensis*)

The Morro Bay kangaroo rat was listed as an Endangered species on October 13, 1970. A small, dark-colored, jumping rodent adapted to arid lands, its remaining populations of an estimated 3,000 occur only in a few square miles of old dune deposits on the south side of Morro

Bay, San Luis Obispo County, California. The primary cause of this species' Endangered status is the destruction of its habitat by the continuing growth of the communities of Los Osos and Baywood Park. Small parts of this habitat are protected within the boundaries of Montana de Oro and Morro Bay State Parks; the remainder is primarily in private ownership and is subject to development. About one square mile of this area was determined to be Critical Habitat in the Federal Register of August 11, 1977.

There is no direct evidence to indicate that the Morro Bay kangaroo rat is currently being exposed to toxic amounts of 1080. However, a recent study of 1080 hazards to nontarget species has shown kangaroo rat mortality during ground squirrel control operations in nearby Tulare County. Also, laboratory studies have shown 1080 to be acutely toxic to kangaroo rats, with the LD50 dosage being 0.15-0.33 mg/kg; 1080 is thus more toxic to kangaroo rats than to ground squirrels, Norway rats, house mice and other common target species. The use of 1080 within or adjacent to the known range of the Morro Bay kangaroo rat could result in significant mortality. It is, therefore, my biological opinion that the use of 1080 is not likely to jeopardize the continued existence of this species if new label and use restrictions are developed to prevent the use of 1080 within the known range of this species, as described by the following boundaries:

From the mouth of the Los Osos Creek in Morro Bay, southward along the western bank of the creek to horseshoe bend in Los Osos Creek approximately ¼ mile south of Bayview Drive, thence southwesterly to the southeast corner of Section 24 (R. 10 E., T. 30 S.), thence westerly along the section boundary to the southeast corner of Section 24 (R. 10 E., T. 30 S.), thence southerly along the section boundary to the southeast corner of Section 26, thence westerly along the southern border of Sections 26 and 27 (R. 10 E., T. 30 S.) to the Pacific Ocean.

A map of this area is enclosed for your use. Before these new restrictions become effective, EPA must reinitiate Section 7 consultation.

Salt Marsh Harvest Mouse (Reithrodontomys raviventris)

The salt marsh harvest mouse was listed as Endangered on October 13, 1970. A small seed-eating rodent superficially resembling a house mouse, this species is endemic to salt marshes all around San Francisco Bay. Filling and diking have steadily reduced the available habitat, although some portions are now protected in National Wildlife Refuges, a National Audubon sanctuary and state lands. No Critical Habitat has yet been determined for this species.

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There is no evidence to indicate this mouse is currently being exposed to toxic amounts of 1080. The chance of 1080 use in or immediately adjacent to its salt marsh habitat is small. There is no data in the literature available to us of the lethal dosage of 1080 to harvest mice, but they can be presumed to be quite sensitive to it on the basis of the high toxicity of 1080 to other rodents. Also, this mouse's small size would make the number of poison grains needed for a lethal dose quite small. It is, therefore, my biological opinion that the use of 1080 is not likely to jeopardize this species if new label and use restrictions are developed to minimize the chances of salt marsh harvest mice coming into contact with it. A map of the best available information on the approximate locations of salt marshes where this species occurs is enclosed. Before new restrictions become effective, EPA must reinstitute Section 7 consultation.

Birds

Like mammals, birds vary in their susceptibility to 1080 poisoning. Research indicates that with the exception of the golden eagle, the LD50 of 1080 to raptors is significantly higher than that of most mammals and seed-eating birds. Under existing use restrictions, the following listed birds are most likely to be exposed to 1080.

California Condor (*Gymnogyps californianus*)

The California condor was listed as an Endangered species in the Federal Register on March 11, 1967. Critical Habitat for the condor was subsequently determined and designated in the Federal Register on September 24, 1976. The condor is a representative of the New World vultures having an average weight of 20 pounds and an average wingspan of 9 feet. Condors are thought to mate for life with one egg being laid between February and May in a cave or rock crevice. Condors occupy a wishbone-shaped portion of California extending from Santa Clara County (rarely San Mateo County) south to Ventura County then north to Fresno County. This area corresponds roughly with the mountainous terrain surrounding the San Joaquin Valley, the coast ranges on the west, Transverse and Tehachapi Mountains at the south and the Sierra Nevadas on the east.

California condors feed only on the carcasses of dead animals, primarily mammals. Many species are eaten but domestic cattle constitute the most important food source by far. Condors will take ground squirrels that have been poisoned.

The condor is now in grave danger of becoming extinct. The most significant symptom of its plight is failure to reproduce, with annual production over the past decade averaging less than two young fledged

per year. The causes of this reproductive failure are unknown, with inadequate food supply, environmental contaminants and disturbances all being possibilities.

Although there is no evidence to indicate that any condor mortality can be attributed to the use of 1080, the possibility exists. Furthermore, the effects of sublethal doses of 1080 are not known. Because the condor is in immediate danger of extinction, the loss of even a single condor, or any action which might impair its fecundity, would not be acceptable. However, use restrictions can be imposed which would reduce the likelihood of exposing 1080 to the condor. Therefore, it is my biological opinion that the continual use of Compound 1080 is not likely to jeopardize the continued existence of the California condor provided EPA develops new label restrictions which reduce the likelihood of exposing the California condor or its Critical Habitat to toxic amounts of 1080. Before these new label restrictions become effective, EPA must reinstitute Section 7 consultation. A description and map of the California condor's Critical Habitat have been enclosed.

Aleutian Canada Goose (Branta canadensis leucopareia)

The Aleutian Canada goose was originally listed as an Endangered species in the Federal Register on March 11, 1967. This subspecies is slightly larger than a mallard with a greyish-brown body; black tail, neck, bill, feet and legs; white cheeks; ring at base of black neck; belly, rump and tail coverts.

In the fall the birds leave the Aleutian Islands breeding area and move eastward along the Aleutian chain where they eventually head south. They arrive on the northwestern California coast between late October and early November. They then move southward to their wintering grounds in the interior valleys of the state. They begin their migration back to the Aleutian Islands in middle February to early March. Their primary food source while in California is fescue, velvet grass, plantain and other plants. No evidence was found to indicate that 1080 was causing any mortality in the Aleutian Canada goose. Therefore, it is my biological opinion that the continued use of 1080 is not likely to jeopardize the continued existence of the Aleutian Canada goose.

Bald Eagle (Haliaeetus leucocephalus)

The bald eagle was initially considered to have two distinct subspecies when the southern bald eagle was originally listed as an Endangered species in the Federal Register on March 11, 1967. The entire species was listed as Endangered in 43 of the conterminous 48 states and Threatened in the remaining five states on February 14, 1978. Eagles are opportunistic feeders, with fish constituting the bulk of their diet. They also feed on

waterfowl and shorebirds, particularly sick or injured individuals, as well as carrion. The consultation team was unable to find any bald eagle mortality which was attributed to 1080 poisoning. Secondary poisoning of eagles through ingestion of 1080-killed rodents seems unlikely in view of the high LD50 for golden eagles. Therefore, it is my biological opinion that the continued use of Compound 1080 under existing label restrictions is not likely to jeopardize the continued existence of the bald eagle.

Arctic and American Peregrine Falcons (Falco peregrinus tundrius and Falco peregrinus anatum)

The Arctic peregrine falcon was listed as Endangered in the United States portion of its range on October 13, 1970, while the Canadian and Greenland populations were added to the list on December 2, 1970. The American peregrine was listed as Endangered in Mexico and Canada on June 2, 1970, and the United States population was added on October 13, 1970. Critical Habitat was determined for the American peregrine falcon in California only on August 11, 1977; remaining Critical Habitat for both subspecies is yet to be determined.

The Arctic peregrine breeds in the North American tundra from approximately 77 degrees north latitude, south to the timber line, east to Ungava Bay, northern Quebec, west to western Alaska, and on the west coast of Greenland. It winters along the gulf coast from Florida west to the eastern Mexican coast and Baja California, south to mid-Chile and mid-Argentina and possibly on the Pacific Islands. During migration, it may pass through almost any one of the lower 48 states.

The American peregrine falcon has been extirpated as a breeding bird in the United States east of the Mississippi. Approximately 50 nesting pairs survive in the western United States and Mexico, with larger but declining populations breeding in Canadian and Alaskan boreal regions. The migratory habits of these birds vary and are not well documented, but generally the further north the birds' breeding range, the further south they travel in the winter, to Latin America or the southern United States.

Field and laboratory evidence indicates that the decline of peregrine populations generally is due to the presence of chlorinated hydrocarbon pesticides in the food supply. This leads to reproductive failure through eggshell thinning and nonviable eggs and increased adult mortality. This reproductive failure was first noticed in the eastern population of the American peregrine and has spread north and west to other American peregrines and now the Arctic peregrine as well. Other factors which may cause local decreases in reproductive success are human disturbance and adverse weather conditions during nesting.

Essential habitat for the peregrine falcon includes preferred breeding areas near rivers, lakes, or the sea, where traditional nesting sites are located and prey is abundant. For American peregrines, nesting sites are most often steep cliff faces which provide protection from predators and a commanding view of the countryside; tundra birds nest on cliffs, dikes, cutbanks and occasionally boulders, hummocks, or the ground.

Both subspecies feed on a wide variety of birds, including waterfowl, shorebirds, woodpeckers and passerines. Ptarmigan are also important to Arctic peregrines in some years. Small mammals are an occasional prey item, but are much less important than birds. Carrion is not a normal component of either subspecies' diet.

The consultation team was unable to find any peregrine falcon mortality which was attributed to 1080 poisoning. Although the LD50 of 1080 to peregrines is not known, secondary poisoning of peregrines through ingestion of 1080-killed rodents seems unlikely in view of the high LD50 for golden eagles and the peregrine's low consumption of mammals and carrion. Therefore, it is my biological opinion that the continued use of Compound 1080 under existing label restrictions is not likely to jeopardize the continued existence of the Arctic or American peregrine falcons.

Passerine Birds

Three small passerine birds were also initially considered in this consultation. However, the range of all three is totally confined to the channel islands off the California coast and the use of 1080 on these islands in a form which might enter the food chain of these species was not discovered. Therefore, it is my biological opinion, based on the information available to the Service, that the continued use of Compound 1080 under existing label restrictions is not likely to jeopardize the continued existence of the Santa Barbara song sparrow (Melospiza melodia graminea), San Clemente sage sparrow (Amphispiza belli clementae), or the San Clemente loggerhead shrike (Lanius ludovicianus nearnsi).

Conclusions and Recommendations

Based on my consultation team's review of the above information and other information available to the Service, it is my biological opinion, subject to the conditions identified herein, that the use of 1080 under label restrictions as outlined in this biological opinion is not likely to jeopardize the continued existence of the listed species considered herein, or result in destruction or adverse modification of their Critical Habitats. However, since there is a potential for some listed species coming into contact with lethal amounts of 1080, recommendations for revision of label restrictions to exclude 1080 use in certain areas or development of new use restrictions have been made. It should be reiterated that EPA must reinstitute Section 7 consultation prior to the issuance of new label restrictions.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203

April 27, 1978

RECEIVED

Mr. Bernard M. Fox, Project Manager
N.E. Utilities Service Co.
P.O. Box 270
Hartford, Connecticut 06101

MAY 10 1978

Energy Facilities Siting Council

Gerald Garfield, Esq.
Day, Berry and Howard
One Constitution Plaza
Hartford, Connecticut 06103

Richard L. Morningstar, Esq.
Peabody, Brown, Rowley & Storey
One Boston Place
Boston, Massachusetts 02108

Dear Messrs. Fox, Garfield and Morningstar:

The application of Northeast Nuclear Energy Company for a National Pollutant Discharge Elimination System ("NPDES") permit, authorizing certain discharges to the Connecticut River from a proposed nuclear power station at Montague, Massachusetts has been reconsidered by the United States Environmental Protection Agency Region I ("EPA") in light of additional information submitted by the applicant on December 27, 1977 in response to an EPA letter of September 20, 1977. EPA has also reviewed a draft demonstration document submitted by the applicant on November 17, 1977 to aid this agency in determining, as required by Section 316(b) of the Federal Clean Water Act, that the cooling water intake structure associated with the proposed discharge is located, designed and constructed so as to minimize adverse environmental impact. We are presently of the opinion that there are still a number of aspects of this project where insufficient data have been presented to allow an NPDES permit to issue. The following is a discussion of the yet unresolved issues:

1. The applicant has not yet submitted three dimensional isotherm and chemical concentration isopleth figures as requested by EPA in its September 20, 1977 letter and as agreed to by the applicant on October

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31, 1977. As agreed, typical winter, typical summer, typical spring (spawning season), maximum delta T, and 7 day-10 year low flow plume characteristics are to be provided. Isotherms should be depicted at one degree intervals, isopleths at 10 dilution factor intervals. A description of the effect that a multi-port diffuser would have on the plume characteristics should also be included. Until this data are received we cannot determine whether the plume will constitute a barrier to migration, whether the mixing zone criteria of the Massachusetts water quality standards will be met and whether the proposed single-port discharge design is acceptable.

2. With regard to the proposed use of chlorine compounds to control biofouling and the consequent proposed discharge of chlorine and its compounds, please note that EPA can not render an opinion at this time. Recent and on-going technical studies by EPA and papers presented at the "Second Conference on Water Chlorination: Environmental Impact and Health Effects" sponsored jointly by EPA, the Oak Ridge National Laboratory, and the U.S. Department of Energy at Gatlinburg, Tennessee in November, 1977 suggest that the existing limits on chlorine may be inadequate to protect against long-term toxicity and the subtle effects of carcinogenicity and mutagenicity. Discussions with EPA headquarters personnel working in the Steam Electric Effluent Guidelines Section indicate that there is strong possibility that the existing limits on chlorine will be revised or withdrawn. It is suggested that the applicant reexamine its proposal to use chlorine as a biofouling control agent. Alternative systems of a mechanical nature should be examined.

For the present, we require, before further consideration of chlorine limits, that the applicant detail all methods it will employ to minimize chlorine discharges and discuss, in particular, the feasibility of using agents such as sulfur dioxide to dechlorinate blowdown prior to discharge.

3. Approval of brass condensor tubing will not be recommended. This determination is based upon the following considerations:
 - a. Evidence presented by the National Marine Fisheries Service (NMFS) at a January 12, 1978 meeting of the applicant, EPA and the Nuclear Regulatory Commission indicating that copper levels in the Connecticut River are naturally high and that ionic copper may already be exerting an inhibitory effect on aquatic biota. NMFS further stated that the applicant's proposed discharge would increase the levels of ionic copper in the river to levels found to prevent egg development in species similar to those found in the Connecticut River.
 - b. The applicant's response dated December 20, 1977 which admits that more sensitive aquatic organisms may be adversely affected by copper concentrations greater than .025 milligrams per liter and that such concentrations could be expected to occur within the plume until the 40 dilution isopleth is reached.

It is therefore suggested that the applicant chose a condensor tubing material of a different composition and submit for review a revised prediction of the chemical constituents of its discharge.

4. Concerning the possibility of shortnosed sturgeon mortalities, it is still the power plant review group's position that no intake structure can be allowed in the Holyoke pool because of predictable egg and larva entrainment. This question has been certified to EPA's Office of General Counsel for advise.
5. Assuming for the purposes of argument that EPA is not legally prohibited from issuing a permit for an intake structure that will result in predictable mortalities to an endangered species, the draft demonstration submitted by the applicant is inadequate to satisfy the National Environmental Policy Act (NEPA) and Section 316(b) of the Federal Clean Water Act because it lacks suitable discussion on alternatives to the proposed system.

Both the applicant and the Nuclear Regulatory Commission share a responsibility under NEPA to evaluate alternatives to proposed actions as part of their licensing activities. In the context of the proposed intake structure location, it is our understanding, which we believe is supported by the environmental impact statement prepared by NRC, that no decision on location would be made until a study of alternative locations was completed. The draft demonstration submitted by the applicant fails to satisfy this requirement. While considerable data was submitted in favor of the proposed location in the Holyoke pool, there are insufficient data presented on other alternatives to allow meaningful evaluation. The primary alternate location identified by the application is the horserace section of the Connecticut above the Turner's falls dam.

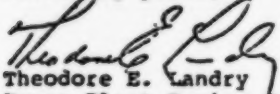
Specifically an evaluation of the Horserace Section as an alternative location requires a full discussion of the hydrological conditions and the aquatic biology (particularly, the benthic species and the resident and foraging fish) at that site. Additionally an evaluation requires an analysis of the probability of entrainment of eggs and larvae of the resident and foraging fish should the intake structure be located in the Horserace Section.

The information submitted on the Holyoke pool alternative also has deficiencies. Discussion of the aquatic biology at this site fails to adequately describe the shortnosed sturgeon life cycle in the pool. 'It is expected that this deficiency will be corrected by studies which the applicant has agreed to conduct this summer). An analysis of the probability of larva entrainment for the resident and foraging fish in this pool is also necessary. In making this analysis major assumptions must be supported by literature or studies. For example, the draft demonstration document states that all shortnosed sturgeon eggs which do not adhere to the substrate will be non-viable. Similarly, the draft states no sturgeon larval entrainment will occur because of the larva will have the ability to detect and avoid the intake current. These statements must be supported or deleted.

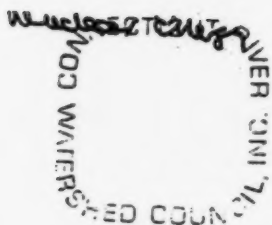
Once the above described information is supplied, this agency will be in a position to determine, in accordance with Section 316(b), the optimal intake location. The applicant may wish to aid this determination by attempting to assess the biological value of fish and other aquatic life lost due to entrainment at each location.

Please note at this time we are unaware of the status of NRC site hearings. If you will include with your response to this letter an updated for these hearings we will endeavor to review your response prior to the completion of the hearings.

Sincerely yours,


Theodore E. Landry
Power Plant Review Group

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CONNECTICUT RIVER
WATERSHED COUNCIL, INC.

125 Combs Road Easthampton, Mass. 01027 Telephone (413) 584-0057

April/May 1977

TO: Local, State and Federal Agencies, Private Organizations and Individuals
WITH INTEREST IN ENERGY AND THE CONNECTICUT RIVER VALLEY.

FROM: Connecticut River Watershed Council, Inc.

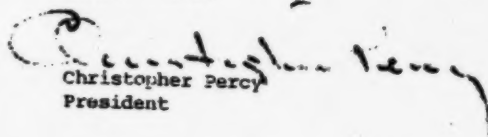
We wish to share with you, by the enclosed Resolution of the Council's Board of Directors, our position on nuclear power in the Connecticut River valley and our recommendations on energy strategy to provide future energy requirements. The vote by the Board of Directors was 20 to 7 in favor.

The Council believes the matter of nuclear power generation to hold serious, unresolved questions and that before additional atomic plants are to be constructed, these must be fully answered.

Further, the Council recognizes that energy supplies to meet future needs are of critical, urgent concern - but that prompt and serious commitment to conservation and efficient use of energy and the rapid development of renewable energy sources will help to assure future needs.

Great progress has been made to restore water quality and to conserve and use wisely land resources in the Connecticut River valley. These efforts have and will continue to be of substantial economic and social benefit to everyone. Such effort must not be relinquished.

Respectfully,


Christopher Percy
President

CP: jds
Enclosure

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RESOLUTION

ON NUCLEAR POWER AND ENERGY STRATEGY

WHEREAS, there has been proposed the construction of two 1150 MWe nuclear power plants at Montague, Massachusetts in the Connecticut River valley in addition to three existing plants at Rowe, Mass., Haddam Neck, Conn., and Vernon, Vt., and others discussed for Monroe, N. H. and in the Connecticut Lakes region in New Hampshire; and

WHEREAS, there persist serious questions about nuclear power, including: potential safety and reliability of operation, safe disposal and long-term protection of radioactive wastes including decommissioned reactors, environmental and social impacts, costs of nuclear power including liability and availability of fuel; and

WHEREAS, the proposed Montague nuclear plants will result in the discharge of thermal, chemical and biocidal effluents and will require extraordinary volumes of fresh water for cooling from the Connecticut River, including the evaporative loss of 38 million gallons per day, especially critical during the low flow periods of the year when public interest in and use of the river are high; and

WHEREAS, Nuclear Regulatory Commission regulations recommend that nuclear power plants be located away from population concentrations, and the area around Montague is densely populated, and further that populated river valleys are undesirable locations for nuclear power plants; and

WHEREAS, authoritative studies report that future energy demand will grow much more slowly than anticipated, thereby allowing conservation measures and other forms of energy technology to be advanced within the framework and guidelines of a national energy policy and plan; and

WHEREAS, the Connecticut River Watershed Council was established for and is dedicated to the appropriate restoration, conservation, wise development and use of the natural resources of the Connecticut River watershed, and holds the Connecticut River to be one of New England's greatest and most valuable resources for water supply, water pollution control, navigation, recreation, fish and wildlife, and maintaining the ecology of the river and its estuarine resources;

NOW, THEREFORE BE IT RESOLVED, that the Board of Directors of the Connecticut River Watershed Council, Inc. assembled at Easthampton, Massachusetts in special meeting this 14th day of April, 1977 does:

(1) Support, as a means to provide future energy requirements, a prompt and serious commitment to conservation and efficient use of energy, rapid development of constant (solar and wind) and renewable energy sources, and special transitional fossil-fuel technologies with emphasis on coal, and

(2) Oppose the construction of the Montague Nuclear Power Station Units 1 and 2, and any additional nuclear power plant construction in the Connecticut River watershed, until the serious questions as raised above are resolved to its satisfaction; and

BE IT FURTHER RESOLVED, that the Board of Directors directs its President to represent the Council as expressed by this Resolution, and to distribute the Resolution to appropriate federal, state, local and private agencies, municipalities and individuals, and to report this action to the membership of the Council at the next annual meeting scheduled for May 6, 1977 in Holyoke, Massachusetts; and

BE IT FURTHER RESOLVED, that the Board of Directors of the Connecticut River Watershed Council will reconsider its actions on this resolution within two years' time.

(SEAL)

April 14, 1977
Date)


CARL ECKER, JR., Chairman
Board of Directors, CRWC


FRANKLIN P. KEARNEY, Acting
Chairman, Energy Committee, CRWC

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Mr. BREAUX. Next we will hear from Mr. Lindell Marsh and Bob Thornton.

STATEMENT OF LINDELL MARSH

Mr. MARSH. I am pleased to have the opportunity to present our comments on the Endangered Species Act, along with Mr. Robert Thornton, who was formerly counsel to this subcommittee.

These comments reflect our collective experience with the Endangered Species Act, as the former counsel to this subcommittee and as an attorney that has 15 years of experience representing the private sector on sensitive resource issues, including endangered species concerns.

Our firm, Nossaman, Krueger & Knox, has represented landowners and developers on a number of projects raising endangered species issues. The species involved in these projects have included birds, insects, as well as plants.

Although our experience in each case has been distinct, there are a number of common lessons that we have derived in attempting to resolve conflict between species preservation and economic development.

In general, we believe that there is a need to formally encourage greater cooperation and collaboration between the Federal agencies and the private sector on endangered issues, and that the act should be amended to encourage such cooperation.

We suggest that the Federal wildlife agencies be authorized to participate in the development of habitat conservation plans initiated by local or State agencies to resolve present or potential endangered species conflicts on an area or regionwide basis.

Our clients' greatest concern with the Endangered Species Act is the absence of any effective coordination between the act and the variety of other State and Federal environmental laws enacted over the last decade.

There is no question that the Endangered Species Act of 1973 addresses legitimate concerns for the fish and wildlife resources of this Nation and the world.

The product of all of the many State, local, and Federal environmental statutes however is a fragmentation of authority that can present an impenetrable regulatory barrier to major projects. The statutes contain different substantive and procedural requirements. There is no existing mechanism to effectively coordinate their implementation.

The greatest problem posed by this fragmentation of regulatory authority is the inefficient sequential review of projects at the local, State, and Federal levels. Typically in California development projects are preceded by the adoption of a general plan which establishes basic land uses.

Federal agency involvement at the general plan stage is limited or nonexistent and yet it is at this stage that critical resource allocation decisions are made. While this deference to the State process may be well-intentioned, it makes it more difficult to resolve conflicts at the permit stage.

As projects are subject to review by multiple agencies, there is a tendency on the part of the agencies to attempt to extract as many

concessions from the project sponsor as possible in order to address their particular concerns without regard to the concessions that may have occurred at an earlier stage of review or those that are likely to occur later.

The project sponsor, recognizing that his project must survive his negotiation process if it is to remain feasible, establishes a progressively more antagonistic posture at each round of regulatory review.

This frequent result is a cycle of disconnected confrontations between the project sponsor and the regulatory agencies with no assurance that the end result will be in the interest of either the project sponsor or the public at large.

It has been our experience that the resolution of disputes involving endangered species is more likely to occur if the solutions to the controversy are developed on an area or regionwide basis. The broader the focus of the effort, the more likely it is that the parties will be able to reach agreement.

More importantly, by addressing endangered species concerns in a comprehensive as opposed to piecemeal fashion, there is an opportunity to anticipate and resolve future conflicts before they develop and to provide assurances to both the private sector and the wildlife agencies that their special concerns will be addressed.

The act does present a practical obstacle to developing solutions on an areawide basis. Although we believe that the primary purpose of the Endangered Species Act is the conservation of ecosystems, the regulatory mechanisms in the act focus on individual agency actions, individual species and even individual members of listed species, as under section 9 which prohibits the taking of endangered species.

Although the act provides for the development of recovery plans for listed species, these plans have not been used as a mechanism to resolve conflicts. Recovery plans are developed by recovery teams appointed by the service. Membership on these teams is generally limited to biologists with expertise in the particular species.

There is little or no interaction between the recovery team and the private sector or the local or State governmental entities. Finally, the recovery plans have no direct regulatory effect.

Based on the foregoing, this is our recommendation. Many of the concerns that we have articulated are not limited to the Endangered Species Act and are in fact largely a product of the fragmentation of regulatory authority between local, State and Federal institutions.

Our experience suggests that the administration of the Endangered Species Act can be improved if conflicts over the conservation of habitat and the preservation of species are resolved at the earliest opportunity possible and in a comprehensive fashion.

Because the existing section 7 consultation process is triggered by an identifiable Federal agency action, it may not occur early enough to avoid conflict. In addition, section 7 does not recognize the legitimacy and need for private sector involvement in the consultation process and therefore fails to promote cooperation between the private sector and the wildlife agencies.

There is no consultation process at all in the act to promote the resolution of section 9 conflicts. Moreover, in the wake of the

Palila decision there is a potentially serious conflict between the intended purposes of sections 7 and 9.

We suggest that the Secretaries of Interior and Commerce be authorized to cooperate with local and State agencies and the private sector in the development of habitat conservation plans to protect and enhance the listed species and to anticipate and resolve conflicts between development activities and species preservation.

These plans could be developed as part of regular local and State regulatory processes, such as, for example, general or coastal zone plans. The terms of the habitat conservation plan could be implemented through local and State regulatory provisions and the regulatory and permit provisions of the Endangered Species Act.

In addition, we anticipate that consensual agreements between the public and private sectors may be necessary to provide adequate assurances to both sides that the terms of the plan will be faithfully implemented.

There are two essential elements to this approach: First, the cooperative development of conservation plans by the wildlife agencies in concert with local and State agencies and the private sector; second, the provision of adequate assurances to the private sector and the wildlife agencies that the terms of the plan will be adequately implemented.

Our suggestion is modeled after an ongoing effort to develop a habitat conservation plan for an endangered butterfly and several other unique species in San Mateo County in northern California.

While that effort, which is described in the attached article from the New York Times, is not completed, all indications are that the effort will successfully avoid a serious confrontation between environmental and developmental concerns.

This effort has involved an unusual degree of cooperation between landowners, developers, local, State agencies, and Federal local political representatives, as well as a local environmental group. We would welcome the opportunity to have the participants in this effort brief the committee in greater detail on the approach that has been developed.

Our suggestion is also modeled on the special area management plan process which has been employed in two instances in the Pacific Northwest and which is now referenced in the Coastal Zone Management Act.

The special area management plan, or SAMP, which was put into the 1978 amendment, is a collaborative planning process which brings together the local, State, and Federal agencies with regulatory authority in a particular coastal area.

The intent of the SAMP process is to streamline the usual regulatory maze by providing an opportunity for all concerned parties to cooperate in the development of a land use plan which addresses their statutory and regulatory concerns.

The central feature of SAMP, and of our proposal, is a multi-agency planning process which can provide a degree of predictability to both the private sector and governmental agencies regarding the future land use decisions which is not available under the existing regulatory system.

We would commend to you the suggestion that formal amendments be made to the act to provide for this process.

[The statement of Mr. Marsh follows:]

PREPARED STATEMENT OF LINDELL L. MARSH, ATTORNEY, NOSSAMAN, KRUEGER & KNOX

I. INTRODUCTION

Mr. Chairman and Members of the Subcommittee, we are pleased to have the opportunity to present our comments on the Endangered Species Act. These comments reflect our collective experience with the Endangered Species Act—as the former counsel to this Subcommittee and as an attorney that has fifteen years experience representing the private sector on sensitive resource issues including endangered species concerns.

Our firm, Nossaman, Krueger & Knox, has represented landowners and developers on a number of projects raising endangered species issues. The species involved in these projects have included birds (California Least Tern), insects (Mission Blue and Callippe Silverspot butterflies), as well as plants (San Diego Mesa Mint). Although our experience in each case has been distinct, there are a number of common lessons that we have derived in attempting to resolve conflict between species preservation and economic development.

In general, we believe that there is a need to formally encourage greater cooperation and collaboration between the Federal agencies and the private sector on endangered species issues, and that the Act should be amended to encourage such cooperation. We suggest that the Federal wildlife agencies be authorized to participate in the development of habitat conservation plans initiated by local or State agencies to resolve present or potential endangered species conflicts on an area or region-wide basis.

II. DISCUSSION

A. Fragmentation of Regulatory Authority.—Our clients' greatest concern with the Endangered Species Act is the absence of any effective coordination between the Act and the variety of other State and Federal environmental laws enacted over the last decade.

There is no question that the Endangered Species Act of 1973 addresses legitimate concerns for the fish and wildlife resources of this Nation and the world. The Act was passed in response to the recognition that our then-existing regulatory mechanisms were inadequately addressing the adverse effects to fish and wildlife resources associated with the industrialization of the twentieth century. The Act is, however, only one of a number of measures enacted at the Federal and State levels to provide for the conservation of our natural resources. At the Federal level, these measures include the National Environmental Policy Act, the Clean Air and Clean Water Acts, the Coastal Zone Management Act and the Fish and Wildlife Coordination Act. In California, the measures include the State rare and endangered species law, the California Environmental Quality Act, the California Coastal Act in addition to the State's general planning laws.

The product of all of these statutes is a fragmentation of authority that can present an impenetrable regulatory barrier to major projects. The statutes contain different substantive and procedural requirements. There is no existing mechanism to effectively coordinate their implementation. For example, the California Coastal Act establishes stringent restrictions on activities within and adjacent to "environmentally sensitive habitat areas".¹ The presence of a rare or endangered species is the primary criteria for the identification of these areas. There is, however, no coordination between the identification of "environmentally sensitive habitat areas" under the Coastal Act and "critical habitat" under the Endangered Species Act. It is entirely conceivable that a coastal project sponsor could satisfy the Coastal Act provisions only to subsequently discover that he has not complied with the requirements of the Endangered Species Act.

Although an EIS prepared pursuant to NEPA can help to coordinate the actions of State and Federal agencies on projects involving endangered species, in many instances an EIS will not be prepared or will be prepared too late in the process to serve as a useful vehicle for coordination. In addition, although the NEPA regulations expressly encourage Federal agencies to coordinate their environmental decisions with those of local and State agencies, there is reluctance on the part of Feder-

¹ California Public Resources Code Section 30240.

al agencies to act in anything other than the traditional manner or to share authority with non-Federal entities.

B. In *Seriatum* Consideration.—The greatest problem posed by this fragmentation of regulatory authority is the inefficient sequential review of projects and the local, State and Federal levels. Typically in California, development projects are preceded by the adoption of a general plan which establishes basic land uses. After the adoption of the general plan, the local planning jurisdiction proceeds to adopt zoning ordinances and other actions to implement the general plan. If the project is within the coastal zone, the land use plan and implementing actions are subject to the approval of the State Coastal Commission.

Federal agency involvement at the general plan stage is limited or non-existent, and yet it is at this stage that critical resource allocation decisions are made. Under most circumstances, Federal agencies do not become involved until after the project has completely proceeded through the local and State approval process. In some cases, Federal agencies are prohibited from making permit decisions until after the State agencies have approved the project.² While this deference to the State process may be well-intentioned, it makes it more difficult to resolve conflicts at the permit stage.

Project modifications which may have been easily accommodated at the general plan stage, become very difficult to implement at the permit stage. The problem is that the triggering mechanism of most Federal statutes is a permit action or some identifiable Federal agency involvement which usually does not occur until relatively late in the planning process.

In the Endangered Species Act, Section 7 does not apply until there is identifiable "agency action". Formal consultation is not required until a determination is made that a known agency action "effects" a listed species. In many instances, however, while Federal agency involvement is anticipated at some time in the future the precise form of the involvement is unknown.

The rationale for keying Section 7 consultation to an identifiable agency action is that the substantive requirement of Section 7 only applies to Federal agencies. This rationale may no longer be sound in light of the decision of the Ninth Circuit in *Palila v. Hawaii Department of Land and Natural Resources*³ which held that the modification of the habitat of an endangered species by any person can, under certain circumstances, violate the taking provisions of Section 9 of the Act. The *Palila* decision, in effect, obliterates the distinction between agency and private actions under the Act and underscores the need for formal consultation process between the private sector and the wildlife agencies on projects posing potential conflicts with Section 9 as well as Section 7.

C. Adversarial Review.—A problem that is related to the fragmentation of regulatory authority and the sequential review by regulatory agencies is the tendency of these agencies to rely on the traditional adversarial processes to resolve disputes. Since conflict is the cornerstone of this process, it is only understandable that the process itself makes it difficult for the parties to work in a cooperative fashion.

As projects are subject to review by multiple agencies, there is a tendency on the part of the agencies to attempt to extract as many concessions from the project sponsor as possible in order to address their particular concerns without regard to the concessions that may have occurred at an earlier stage of review or those that are likely to occur later. The project sponsor, recognizing that his project must survive this negotiation process if it is to remain feasible, establishes a progressively more antagonistic posture at each round of regulatory review. The frequent result is a cycle of disconnected confrontations between the project sponsor and the regulatory agencies with no assurance that the end result will be in the interest of either the project sponsor or the public at large.

D. Area-Wide Planning.—It has been our experience that the resolution of disputes involving endangered species is more likely to occur if the solutions to the controversy are developed on an area or region-wide basis. The broader the focus of the effort, the more likely it is that the parties will be able to reach agreement.

² For example, regulations promulgated by the Corps of Engineers pursuant to the consistency provision of the Coastal Zone Management Act prohibit the issuance of a Corps permit until satisfaction of the consistency requirement. 33 C.F.R. Section 320.4(h). Although the Corps is authorized to process permits concurrently with State and local processing, there is an understandable reluctance to devote substantial effort to concurrent processing while a project is still under review at the local level. In addition, although the consistency regulations encourage deference to state decisions, Federal agencies are not authorized to issue permits to State-approved projects unless the project also complies with the permit criteria of the Federal regulatory programs. See, 15 C.F.R. Section 930.63(c).

³ 639 F.2d 495 (9th Cir. 1981).

More importantly, by addressing endangered species concerns in a comprehensive as opposed to piecemeal fashion, there is an opportunity to anticipate and resolve future conflicts before they develop and to provide assurances to both the private sector and the wildlife agencies that their special concerns will be addressed.

The Act does present a practical obstacle to developing solutions on an area-wide basis. Although we believe that the primary purpose of the Endangered Species Act is the conservation of ecosystems, the regulatory mechanisms in the Act focus on individual agency actions, individual species and even individual members of listed species as under section nine. Thus, there is an inherent conflict between the broader purposes of the Act which are to protect ecosystems and the narrower purposes which emphasize the protection of individual animals.

Although the Act provides for the development of recovery plans for listed species, these plans have not been used as a mechanism to resolve conflicts. Recovery plans are developed by recovery teams appointed by the service. Membership on these teams is generally limited to biologists with expertise in the particular species. There is little or no interaction between the recovery team and the private sector or non official wildlife local or State governmental entities. Finally, the recovery plans have no direct regulatory effect.

III. BASE ON THE FOREGOING THIS IS OUR RECOMMENDATION.

Many of the concerns that we have articulated are not limited to the Endangered Species Act, and are in fact largely a product of the fragmentation of regulatory authority between local, State and Federal institutions.

Our experience suggests that the administration of the Endangered Species Act can be improved if conflicts over the conservation of habitat and the preservation of species are resolved at the earliest opportunity possible and in a comprehensive fashion. Because the existing Section 7 consultation process is triggered by an identifiable Federal agency action, it may not occur early enough to avoid conflict. In addition, Section 7 does not recognize the legitimacy and need for private sector involvement in the consultation process, and therefore fails to promote cooperation between the private sector and the wildlife agencies.

There is no consultation process at all in the Act to promote the resolution of Section 9 conflicts. Moreover, in the wake of the *Palila* decision, there is a potentially serious conflict between the intended purposes of Sections 7 and 9.

We suggest that the Secretaries of Interior and Commerce be authorized to cooperate with local and State agencies and the private sector in the development of habitat conservation plans to protect and enhance the habitat of listed species and to anticipate and resolve conflicts between development activities and species preservation. These plans could be developed as part of regular local and State regulatory processes, such as for example general or coastal zone plans. The terms of the habitat conservation plan could be implemented through local and State regulatory provisions and the regulatory and permit provisions of the Endangered Species Act. In addition, we anticipate that consensual agreements between the public and private sectors may be necessary to provide adequate assurances to both sides that the terms of the plan will be faithfully implemented.

There are two essential elements to this approach. First, the cooperative development of conservation plans by the wildlife agencies in concert with local and State agencies and the private sector. Second, the provision of adequate assurances to the private sector and the wildlife agencies that the terms of the plan will be adequately implemented.

Our suggestion is modeled after an on-going effort to develop a habitat conservation plan for an endangered butterfly and several other unique species in San Mateo County in Northern California. While that effort, which is described in the attached article from the New York Times, is not completed, all indications are that the effort will successfully avoid a serious confrontation between environmental and developmental concerns. This effort has involved an unusual degree of cooperation between landowners, developers, local, State agencies and Federal local political representatives, as well as a local environmental group. We would welcome the opportunity to have the participants in this effort brief the Committee in greater detail on the approach that has been developed.

Our suggestion is also modeled on the Special Area Management Plan process which has been employed in two instances in Pacific Northwest and which is now referenced in the Coastal Zone Management Act.⁴ The Special Area Management

⁴ 16 U.S.C. Section 1452(3).

Plan, or SAMP, which was put into the 1978 amendment is a collaborative planning process which brings together the local, State and Federal agencies with regulatory authority in a particular coastal area. The intent of the SAMP process is to streamline the usual regulatory maze by providing an opportunity for all concerned parties to cooperate in the development of a land use plan which addresses their statutory and regulatory concerns. The central feature of SAMP, and of our proposal, is a multi-agency planning process which can provide a degree of predictability to both the private sector and governmental agencies regarding future land use decisions which is not available under the existing regulatory system.

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The New York Times

SATURDAY, FEBRUARY 4, 1965



Thomas S. Reid, who studied the rare butterflies, on San Bruno Mountain. At left is a *Atalanta Atlas*, an endangered species; above, a *Calappa silverspot*, not yet on the endangered list.

Builder Stumbles on Potent Foe: Butterflies

By WAYNE KING
Special to The New York Times

SAN FRANCISCO, Feb. 3—After two years of almost legal, scientific and political maneuvering to liberate 3,000 acres of valuable real estate occupied by squads of sky blue butterflies, Sherman Entebbe seems more content than angry.

"Eight hundred thousand dollars," he says, has been expended between realtors and checking. "We have spent \$800,000 checking butterflies."

Mr. Entebbe is president of a land development company called Vistacon Associates. Sixteen years ago to de-

velop what would be a small city, on San Bruno Mountain just south of San Francisco, officials to be one of the largest private developments had up by concern about an endangered species. But it may still go forward under a company proposal that the developers and Federal officials hope will preserve the butterflies and allow building. If these hopes are realized, it could set a pattern for future development of critical habitats.

Home of Rare Butterflies

It is a magnificent real estate. But it is also the home of three rare butterflies, two of them endangered species, and for the past two years the Federal Government has at once decided that nothing would be built there because of them.

The company's plan to erect 3,300 dwelling units worth a total of \$300 million to \$750 million is believed by Fed-

eral officials to be one of the largest private developments in the United States, and even by California stand-

Continued on Page 7, Column 1

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Rare Butterflies Delay Housing on Coast

Continued From Page 1

ards it is a place of extraordinary beauty, overlooking San Francisco Bay and the Indian Pacific.

As its northernmost point, the tract lies a few streets away from the San Francisco city line, and it is surrounded by the municipalities of Bayshore, Daly City, Colma, South San Francisco and Burlingame. It is thus ideally situated in what is the tightest and most expensive housing market in the country.

Over its ridges flutter three quaintly named butterflies, the Mission Blue, the San Bruno Elfin and San Francisco Silverspot. Like the mountains, they are beautiful and fragile. And they are particular about where they live.

"There have been no declines," said Thomas S. Reid, an environmental consultant. "They have dramatic real estate here, and a spectacular view."

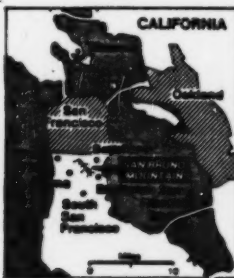
Except for a few Mission Blues in the Twin Peaks area of San Francisco, none of the three species dwells anywhere but San Bruno Mountain. The San Francisco Silverspot, now commonly referred to as the Callippe Silverspot, after its scientific name, is extinct in San Francisco.

Put on Endangered List

The Mission Blue and the Elfin were placed on the Federal Government's list of endangered species in 1976. The Silverspot was proposed for endangered status in 1986, but the petition lapsed after San Mateo County pledged to study and protect the species.

For the past 13 months, as these rare butterflies were in their adult stages, the sun-drenched ridges of San Bruno Mountain have been awash with people with nets, catching, coding and tracing butterflies, watching them eat, sleep, flutter about, mate, lay eggs, grow old and die. Vegetation was studied, drainage mapped, temperature and rainfall recorded and other critical aspects of the habitat measured and analyzed.

The extensive study, conducted by Mr. Reid's firm, Thomas S. Reid Associates and paid for by the developer, resulted in a "habitat conservation plan" for submission to the United States Fish and Game Service. Mr. Reid, the developer and the agency hope it will preserve the butterflies while allowing development of about a tenth of the land.



Mountain site is one of nation's major undeveloped urban areas.

It is also hoped that the cooperative approach will serve as something of a model for resolving such conflicts, avoiding repetition of the small darter episode of 1976. In that case, completion of the \$126 million Tellico Dam in Tennessee was held up for three years when it was discovered that a tiny endangered three-inch, snail-eating perch called the small darter lived in the Little Tennessee River.

Better Solutions Sought

Ultimately, the snail was transplanted and an act of Congress allowed construction to be resumed. Then it was discovered that another colony of the fish existed 40 miles away.

Since then, Federal officials have sought better solutions.

"I've talked to a lot of people," said Magnus Carlson, a spokesman for the Fish and Wildlife Service in Washington. "and everyone feels that this is really the wave of the future; that the Fish and Wildlife Service and the environmental groups and the developers will be working together on these conservation plans to conserve species — perhaps sometimes instead of listing them as endangered. We see this as a good thing, and something we plan to be doing more of."

Although both the Mission Blue and the San Bruno Elfin butterflies have been on the endangered list since 1976, Mr. Eubanks said he was unaware they lived on the mountain until 1986.

Early that year, a University of California entomologist ranging the ridges with a butterfly net captured a San Francisco Silverspot.

Once it was discovered, the Fish and Wildlife Service notified Mr. Eubanks that its habitat, the precise area proposed for development, was to be declared a critical habitat, which meant the area could not be developed even though that butterfly was not on the endangered list.

"It really blighted all the land on which we had building entitlement," said Mr. Eubanks. "It was really frustrating."

Land Conveyed to State

Just 10 days before he received the notice, the company conveyed the last part of 2,000 acres of land it had sold and donated to the state as parkland, in part to placate environmentalists opposed to any development on the mountain.

Lobbying and negotiations with the Fish and Wildlife Service resulted in dropping the Silverspot, in return for a guarantee that it would be protected, but then Mr. Eubanks discovered he had an even worse problem: the other two butterflies.

The Endangered Species Act of 1973 makes it "unlawful for any person under the jurisdiction of the United States to take any such species within the United States." Although the act did not define what "taking" an endangered species means, the Federal Fish and Wildlife Service said it means capturing it, killing it or destroying its habitat.

Since the butterflies lived year-round on the mountain, any construction would kill some of them and destroy part of their habitat.

Mr. Reid said he believes the habitat conservation plan will enhance the butterflies' chance of survival.

The plan, which must also be approved by the state, the county and several of the municipalities surrounding the mountain, provides for development by private contractors who buy the land of some 2,300 dwelling units, coupled with plans for regrading, planting and improving the stands of redwood and various other trees and shrubs and provisions for monitoring the environment in perpetuity, to be paid for by assessments on home owners.

"That," said Mr. Reid, "will be one of the things that will make it possible for people to have a home on the mountain, along with the butterflies."

Mr. BREAUX. Mr. Lambertson, your area is in charge of the listing of species on the Endangered Species Act. I am concerned about the memo that came from within the Interior Department last December that stated that actions of some of the Interior Board in blocking new listings raised serious questions of legitimate policy decisions and precluded, circumvented or subordinated by pseudo-legalistic employees being used as excuses for delay.

That is a pretty serious charge. That is saying that despite the fact that Congress has written a pretty good law, individuals are doing what they can to circumvent it. I want to know, what is the problem? Is there any truth to that allegation?

Mr. LAMBERTSON. That memorandum was written to me. As soon as I received it, I called a meeting of the people concerned, including our Assistant Secretary, and asked the same question you asked: What is the problem here?

The answer we got is that we had three or four potentially conflicting economic directives that told us how we were supposed to do an economic analysis at the time that we did a listing package, and that our people were somewhat frustrated in attempting to meet all of these economic directives.

The conclusion was that we needed a firm set of guidelines as to how this would be done. We have been assured at this time that those guidelines are very close to completion, and we will have one comprehensive set of economic guidelines we can all use.

Mr. BREAUX. When can this committee expect to see the guidelines regarding the process for listing endangered species?

Mr. LAMBERTSON. I checked on Friday, and I was told they were in the final phases of clearance in the Solicitor's Office. I can't tell you when the Solicitor will clear them, but I was told it would be very soon.

Mr. BREAUX. Are these guidelines addressing the issue of economic considerations of a species at the time of listing?

Mr. LAMBERTSON. Yes, they would, sir.

Mr. BREAUX. In what way?

Mr. LAMBERTSON. They would take all of the requirements of section 4(b) of the act, of the Regulatory Flexibility Act, Executive Order 12291, and the Paperwork Reduction Act, which all require that we do a different kind of analysis for a listing package. They would tell us in some detail exactly how we would do the analyses to meet all requirements.

Mr. BREAUX. Since the recommendations are not finalized yet, I am trying to figure out whether you will do an economic analysis on a species that is proposed to be listed or not.

Do you have any idea?

Mr. LAMBERTSON. Yes, sir. Presently under the act, as Mr. Bean explained, we are required to list critical habitat simultaneously with listing most species. We are required to do an economic analysis with that critical habitat designation.

At the present time, there will be economic analyses. The primary question is how should we do that economic analyses. What points do we include within it?

Mr. BREAUX. Will the economic analysis be done on a listing of the species or on the designation of the critical habitat for that species?

Mr. LAMBERTSON. The listing package will contain both the listing and the critical habitat. At the present time, we do the economic analysis on both aspects. The act requires the economic analysis on the critical habitat portion, but the Regulatory Flexibility Act and Executive order require it on the entire listing package.

Mr. BREAU. So what you are telling me is that both procedures will be combined and there will be one economic analysis.

Mr. LAMBERTSON. Yes.

Mr. BREAU. Should that aid in speeding up the program?

Mr. LAMBERTSON. I discussed this at some length with Mr. Spinks, and he has assured me that if they can get a comprehensive set of guidelines, that they can be complied with.

Our problem has been that we have different requirements that mean different things to different people, and we have not been able to get in one place a concrete set of guidelines as to how we comply with those requirements.

Mr. BREAU. I think you are on the right track. We are going to try to ferry through, if you will, the recommendations and Executive orders that are currently floating around with regard to how this procedure should be carried out.

A specific question that we are concerned with is will the listing of the species itself be subject to economic considerations or will that be made on the basis of biological considerations?

Mr. LAMBERTSON. The present position we take is that the decision, whether or not to list, is based upon biological considerations. However, at the time that the decision is made, the decisionmaker should be aware of the economic consequences of that decision.

Mr. BREAU. Isn't that why we are in the mess we are in right now?

Mr. LAMBERTSON. I don't understand the question.

Mr. BREAU. I thought it was pretty simple. People have told us in previous panels that one of the reasons why the department has not moved forward as they should is because of this economic analysis that has to be done of the critical habitat definition.

Therefore, it is really being delayed and species are not being listed because you are doing the critical habitat designation at the same time you are listing the species.

I think what you are telling me is that is what you intend to do in the future. Maybe I am wrong.

Mr. LAMBERTSON. No, sir. As I understood the testimony this morning, the concern was that if we conduct an economic analysis of the listing, the decisionmaker will balance between the economic impact of that proposed listing and the biological needs of the species in question.

Our present position is that the decisionmaker will not get into a balancing situation. The listing will be determined strictly upon the biological impact.

However, the President's Executive order and the Regulatory Flexibility Act tell us that when we promulgate a regulation, we should at least be aware of the economic consequences of that regulation, and the economic analysis is for the purpose of informing that decisionmaker what those impacts are, even though the Endangered Species Act tells us the decision should be based upon biology.

Mr. BREAU. To get back to my famous Houston toad example, which we talked about, or any endangered species, suppose your biologist tells you there are two left, one male and one female, that live in the larger cities of the United States. You have a clear example of a species clearly in danger. You have a conflict because of designating the areas in which it resides. The two of them would create some horrendous economic impact.

How would you approach that problem under the new guidelines which you are expecting to come out?

Mr. LAMBERTSON. You are saying this is the situation before the species has been listed?

Mr. BREAU. Somebody proposes to you and biological evidence is very clear that there are very few left, but you also are told at that time that it is right in the middle of a downtown area.

How would you approach that scenario?

Mr. LAMBERTSON. We have not encountered that sort of thing, so I would have to give you my personal view on what I would recommend to the decisionmakers.

My personal recommendation would be that the law presently requires us to do economic analysis so that the final decisionmaker would know the consequences of that listing, but if the biological data were clear that the species is endangered, then the Endangered Species Act requires that it be listed.

Mr. BREAU. Mr. Haggard, there are some who say you don't need any changes in the act because if we have potential economic conflicts, we have a process that was developed in 1978 to resolve those conflicts. We have the appeal before the three-member panel and it works its way up to a Cabinet level.

I guess what you are saying is that is fine on paper, but if you look at something that would potentially require 800 or more days to get a decision on, from a practical standpoint you are precluded from coming up with a reasonable method to resolve these conflicts. Is that correct?

Mr. HAGGARD. That is correct. I am concerned about the suggestions that because there have not been really more serious problems caused by the process, that it doesn't constitute a problem.

I think we all agree that it is the responsibility of Congress to anticipate problems and by simply reading the process, seeing how much time, at the minimum, it must take. If any of the AMC member companies have invested, for example, several million dollars in a mine project and then were faced with the delay in the exemption process, the results would likely be disastrous for that company. That is why we are concerned.

Mr. BREAU. Mr. Lambertson and others would say, "well, you know we are solving these problems when we designate the critical habitat because at that time we are looking at the economic conflicts and we are modifying the habitat or we are factoring in an economic concern at the time we designate a critical habitat." That should resolve your problem.

Mr. HAGGARD. Well, not only is there the possibility that the habitat may or may not be designated by the Fish and Wildlife Service, but we are always concerned about provisions of the statute to require habitats be designated with or without consider-

ations of economics and without being able to determine at that time the presence or absence of minerals in the area.

Mr. BREAUX. There are those who would make a very loud argument for that. It is not a problem because we modified the act in 1978 and since then we have only had a meager two submissions to exemption processes. We have only had two in the whole United States.

It must indicate we really don't have a lot of problems out there because only two or three development projects have asked for help. So, it can't be a real problem. Let's keep it like it is.

Do you have a response to that?

Mr. HAGGARD. I believe if I were advising a client who has the flexibility to choose locations, whether or not at some economic hardship, they should go through the process or choose another location, I would say don't go through the process because the cost and time are just too much.

But the distinction there, particularly, in our business is with mineral resources, in which there are not choices of locations. When we butt up against an environmental or endangered species problem, we are locked into it. Because of that, if we have to go through the extended exemption process, as I say, the results would likely be very damaging.

Mr. BREAUX. My final point with your testimony has to do with your suggestion that the term species on the listing process not include distinct population of species. I would only be concerned that that methodology and terminology works both ways.

We look at Louisiana's alligator problems and the alligators in North America. They are certainly not endangered in my State, but are damn well endangered in many places. So I think it is a positive feature that they can say it is endangered in Maine but not in Louisiana; therefore, you ought to be able to protect it where it doesn't exist and obviously where it exists more than the people.

Mr. HAGGARD. That really gets to the two possible purposes that could be served by the act: One, to diversify areas of rare species for esthetic reasons, because people enjoy having diverse populations of many species in the areas where they happen to be; the other purpose, which I think is what Congress intended and what should be intended by the act; that is, to mitigate the extinction or mitigate the likelihood of the extinction of species and to balance that mitigation with other national needs.

To accomplish that purpose, fringe habitat protection where species are abundant in their other areas, in our view, is not really needed.

Mr. BREAUX. I thank you for your comments.

Mr. Marsh, on your testimony, I think it really exhibits a well-thought out presentation on behalf of your firm, who has had a tremendous amount of experience, I might add, for the benefit of our committee members who might not know it, of being a leading law firm on the west coast, I guess nationally, in trying to work out some of these problems.

The San Bruno case that I mentioned was the subject of a New York Times article, and one of the developers started off by saying we have spent \$800,000 chasing butterflies. He points out that the problems that they have experienced with regard to trying to de-

velop the 3,600 acres of prime land near San Francisco have been because of this.

I guess the essence of your recommendation is we ought to be able to get into these conflicts before they become irresolvable conflicts; in other words, we ought to have Federal Government participating with developers and local government bodies prior to the time that someone has to request a 440 permit or an EPA permit or what have you.

Is that basically what you are saying?

Mr. MARSH. Yes. I appreciate your comments, Congressman Breaux. The essence of our approach is to say let's do the planning all together, at for example the general plan stage, where it is normally done in California and where the tradeoffs can be made.

The problem we had with respect to the butterfly was that there was no Federal action proposed at the time that our clients discovered the presence of the endangered butterflies. Therefore, there was no way to get into the consultation process.

In addition, with respect to the problem in San Diego concerning vernal pools and the San Diego Mesa Mint, it was much the same problem. By the time we found we had a problem, it was long after a time when local land use plans could be revised without considerable disruption.

The cost was large in the San Bruno Mountain case for a couple of reasons. One, because the process was somewhat unusual, we had to convince, in a way, everybody that it could work; not only the Service, which initially at some levels was reticent to participate in the process but also surprisingly the State and local agencies.

A number of agency representatives expressed doubt that this process could be successfully completed. Therefore, I think that it is important to stress the need for some kind of statement in the act that this is the kind of process that can be used and that the Federal Government condones and encourages it.

Mr. BREAUX. I did not look at your recommendations legislatively. Did you suggest legislative language which would assist in that regard?

Mr. MARSH. We have not suggested specific language. We would be happy to do so. But the essence of it would be to, at this point our thought is, to suggest a process, a planning process, possibly initiated by local or State agencies, which would be cooperated in by the Federal agency.

We think that there is some value in following the model of both the Vernal Pool situation as well as the San Bruno Mountain situation. The governmental agency having jurisdictional power over the area has been the lead agency at San Bruno Mountain. We think that this model could be helpful with the Clean Water Act, for example, and other acts where there is a primary planning agency that brings in, certainly, other levels and layers of government as appropriate. We think that is the place that these kind of decisions need to be reconciled. We think it is in keeping with where the administration is going as well.

Mr. BREAUX. Mr. Forsythe.

Mr. FORSYTHE. Thank you, Mr. Chairman.

I thank the panel for your testimony.

Mr. Haggard, you discuss the section 7 process, which is rather complicated, but you heard the testimony that out of some 9,600 consultations, both informal and formal, there were only a total of 185 over a 3-year period that resulted in a jeopardy opinion. Only 15 projects were not completed. Out of those, only six, but according to Mr. Berlin maybe only two, were actually stopped as a result of the Endangered Species Act. And is that not where the real working of this act should be? Is it not appearing to be rather successful?

Mr. HAGGARD. That is correct. The real working of the act is in the consultation process up to the point that the absolute provisions of section 7(a)(2) kick in. And I somehow do not receive much comfort that there has not been more than two major projects stopped, and that in those 9,000 instances or 180 that have been gone through, there has not been a problem, when I see the absolute provisions of section 7(a) lying there, available to environmental groups whether their object is to protect the species or for other reasons—and that authority exists which would allow an agency or an environmental group to enjoin the further development of a mine or a factory and then be faced with the—beyond the 9,000 cases you mentioned, the extended process of exemption.

Mr. FORSYTHE. Well, I just come back to that those are the facts. If you take the six that may have other matters of other Federal or whatever nature that have stopped them, that is still a rather remarkable number. The fact that they have not gone beyond must mean that something was worked out, does it not?

Mr. HAGGARD. Either remarkable or, in our instance I might say lucky. And that is the instance with mining. As I mentioned before, those projects, many of them I suspect have been moved to another place, or there have been other means to change their location. In the case of a mine or mine processing facilities, they are locked into a single area.

Mr. FORSYTHE. Do you have any examples of mining operations at this point that have run afoul of the act in a way that is indicative the act should be changed?

Mr. HAGGARD. Mr. Berlin and I are both familiar with one instance of the Asarco project in Montana. Fortunately in that instance Fish and Wildlife Service provided a nonjeopardy opinion. The suit came about because environmental groups disagreed with that and attempted to stop the project anyway. But in that case, if the Fish and Wildlife Service could not have provided a nonjeopardy opinion, and if the exemption process would have had to have been followed—there is a good indication of an ore body within that exploration project; the area would be closed at least in 1984 if not sooner by the cutoff date for mining in wilderness. If the nonjeopardy opinion had not been provided and upheld in court, that ore body likely would have been lost. Now that is only because there happened to be in that case a nonjeopardy opinion provided. In other cases there could easily have been a jeopardy opinion, and the exemption process required.

Mr. FORSYTHE. As you know, you are stringing a series of ifs together which did not happen on that project. I would like Mr. Berlin to comment on that.

Mr. BERLIN. In my testimony, I give an extensive and detailed analysis of the Asarco problem. I also attach a very detailed memorandum from the Fish and Wildlife Service discussing the problem. I am quite familiar with the case, because I was with the Department of Justice before I came to National Audubon, and we defended Asarco's right to go ahead and do that exploration.

You have to bear in mind though that, as I pointed out in my testimony, the potential for mineralization in this area was discovered in 1963 by Kennecott Co. Kennecott's interests or whatever was transferred to Asarco in the early 1970's. It then took Asarco essentially 16 years from the time of the initial discovery to the point of time it decided to go into actual exploration in that area. Given that long delay, and they knew throughout this whole time that the restrictions of the Wilderness Act might come into effect in the middle 1980's, I do not see where they can complain about a 2-month delay, particularly since the consultation process worked for them. The Service approved the exploration and Asarco is proceeding.

The Fish and Wildlife Service put no restriction on the project; the Forest Service put on 61 restrictions because the drilling was going to take place in a wilderness area. It is awfully hard to see why Asarco had a bigger problem with the Endangered Species Act than they did with many other statutes they had to deal with. The problem identified in the timing of the exemption process is one that can be dealt with without substantive changes to section 7. If in fact the process is too long, it seems to me the way to deal with that is to come up with an amendment that reduces the time period involved to one that is acceptable. We, certainly, the National Wildlife Federation are proposing such an amendment, and I am sure you are considering one.

Mr. FORSTHE. Thank you.

Mr. Carlton, you refer to the redefinition of harm as published in the Federal regulations as narrowing the impact section 9 has on private landowners. So far as your concern, how do you react, the redefinition of harm, Mr. Carlton.

Mr. CARLTON. We do not believe that the redefinition did a great deal for us. We feel it is still possible to consider environmental modification to be a taking under the definition that was proposed and finally accepted. In our testimony we point out that when Congress was considering this act in 1973, it looked at the two major causes which appear to bring about endangerment or the threat of endangerment to species. One was the taking or the removal of individuals from populations. The other was environmental modification, degradation, or destruction. At that time Congress did consider bills which would have combined these two mechanisms, that is removal and also habitat modification, as a taking, and would have prohibited them. It decided not to do so.

Congress decided to establish two ways to address those causes. No. 1, it would prohibit removal of individuals from populations so as to remove that cause of endangerment. To address habitat modification, it provided for habitat acquisition. It provided to the Secretary of the Interior, and to the Secretary of Agriculture with respect to the National Forest System, the authority to acquire lands for the purpose of conserving endangered species.

We think that the interpretation of the definition as given by the Fish and Wildlife Service goes far beyond what Congress intended. We would like to see the definition further modified so as to provide that an environmental modification is a taking, provided that it has the direct and immediate effect of injuring or killing listed species.

Mr. FORSYTHE. Mr. Berlin, any comment?

Mr. BERLIN. Yes, I certainly disagree that Congress did not intend to cover this situation. If you look at the Endangered Species Act, the purpose of the act is to "provide a means whereby the ecosystems upon which endangered species depend may be conserved." Conservation is the "use of all methods necessary to bring the population of the species to the point where it is no longer threatened or endangered." With that purpose and with that conservation goal, the definition we are dealing with is quite consistent.

The Senate, in its report on the act, said that "take" is to be defined in the broadest manner to cover the broadest way in which a person can attempt to take wildlife. So take was intended to have a broad definition. We have a long line of experience with how the take provision works. We have 9 years now since the act passed, 8 under the old definition, which was quite a bit broader. In that time period there was only one injunction entered against a project for proceeding because of a possible take. That involved a situation in Hawaii where the activity would have driven a species out of existence.

I think where the take provision stops private activity is up in the air. Certainly the Department of Justice, when I was there, argued you had to show irreparable injury. To read the take provision consistently with the section 7 provision you had to look to in a sense to injury to the whole species. So you would not get an injunction for slight modification of habitat. I do not know if that will ultimately be the law or not, but it was certainly the Government's position, and one that means that the take provision does not provide a major blocking point for activity. The history is that that is not the case. We do have examples in the forest products industry of voluntary compliance with the act. Some of those examples go back to before the passage of the act. I cite an example of Westvaco, which developed a project in 1970. We think most companies want to take care of those species.

Mr. BREAU. Mr. Tauzin.

Mr. TAUZIN. Thank you, Mr. Chairman.

There has been some discussion of the fact that many applications have been stopped and many have been altered as a result of the process. I am not sure if the example I will give you is common to many of those who have been altered, but it is quite important to look at many of those, I think, and see whether or not there are problems in the system.

When I was 1 year old, about 20 years ago, the folks who live along the old Highway 90, which is a highway link in the Third Congressional District in coastal southern Louisiana, they were in the process of trying to build a four-lane system. That process has gone on until this last year, when we finally got the permit.

The permit process was a long and arduous one. The last time it was attempted it was halted because of objections primarily from this act. The permit, which was then, I think, under the auspices of the Corps of Engineers, was denied because there was discovered a bald eagle nest along the route of the highway. Therefore, the project was halted at that stage, and a route was chosen under the auspices of the Coast Guard, finally. I do not know why.

The end result was that many hundreds of millions of dollars were added to the cost of that project. In the course of the permit application process some 57 people I think, died, as a result of the horrible conditions on the two-lane highway. I do not believe the eagle ever returned to the nest, by the way.

Now something is basically wrong with a system that operates that way. I know that is a hard case. I know that legal axiom that hard cases make bad law should apply here. I do not want to make any bad laws as a result of this hard case. But to ask 57 people to bear the cost of this process with their lives, not counting the hundreds of millions of dollars it will cost to build the highway now that it would not have cost, is a strained interpretation of the act. I want to see eagles protected also, but how do we cure those problems in the act?

Mr. BERLIN. The only way we can deal with that is when the costs become unacceptable, the exemption process has to be entered into. If we had a reasonably quick exemption process on the order of 225 days—we are not talking about a major delay on a project that went through years of various kinds of planning. What we have to do is come up with a process where (a) we have that available and (b) where endangered species problems are identified early enough in the process so this can be resolved while other types of review are going on. The act attempts to do that I believe in the 7(c) biological assessment at the beginning of the construction project. We are certainly talking with representatives of industry groups like the Western Regional Council that will testify later to try to deal with the procedural problems we have with that. Our goal is to make these proceedings work.

Mr. TAUZIN. It ought to be. I will go back to the chairman's case of the South Dakota incident. The agricultural secretary there testified in a hearing he quoted a mailgram from the Service that (a) denied their request for use of the compound 1080 on the basis continued existence of the black-footed ferrets which are protected endangered species. He cited figures of \$22.4 million worth of damage, 700,000 acres infested, as opposed to some 60,000 before the infestation. Yet they continue to get denials on the basis of black-footed-ferret protection. There was testimony that the black-footed ferret was not endangered in other States, necessarily, but that also there had been only one confirmed sighting of a black-footed ferret in South Dakota in the past 10 years. He asked the question, would a reasonable person conclude that millions of dollars' worth of devastation to hundreds and thousands of acres of land should be able to continue on an annual basis in order to protect an optical illusion. It is a very good question he asked. How do you respond?

Mr. BERLIN. In several ways. The only biological opinion I am familiar with is the one in 1978 which did propose this alternative of actually doing a status survey of each population before——

Mr. TAUZIN. I sent you the mailgram from Irving Johnson to the Department of Agriculture July 22, 1980, denying the permit because of black-footed ferrets in the area.

Mr. BERLIN. The quickest response I have to that because I am not fully familiar with the document is subsequent to that mailgram South Dakota did bring a lawsuit charging the Federal Government's failure to conduct proper control in that State. If they had a valid, legitimate argument, which they may have had based on that description, they should have tried to exercise their legal rights and had that biological opinion overturned. They did not do that.

Mr. TAUZIN. Is there not something basically wrong with a system that produces that Mailgram? I mean, black-footed ferrets ought to be protected, but is there not something wrong with the fact that the Service felt compelled to put the State in that type of situation where it had to go to court and seek legal redress while suffering this enormous loss?

Mr. BERLIN. One, is that the fast exemption process would deal with it; two, there are other alternatives they could have followed. I think one of the problems there that I can confirm is that in fact the Service takes the view that zinc phosphide, the other chemical, is an effective chemical, and the Department of Agriculture takes the view they have had success with that chemical.

Mr. TAUZIN. Besides the figures with that chemical, the Department of Agriculture's testimony was to the effect that the zinc phosphide use indicated that the infestation grew from 60,000 to 70,000 acres. It could not have been too effective.

Mr. BERLIN. There are a lot of factors involved again. But it does seem to me that you have an exemption process that these people could utilize. That telegram came 2 years after the biological opinion came down. So no matter how long the exemption process is, there was no reason why you could not have pushed that process forward.

Mr. TAUZIN. You are right, I do not think they used the exemption process. But I think the case of my highway, the case of this prairie dog infestation, they do call to my attention that this act needs some work. Certainly the implementation of the act needs some work.

Mr. BERLIN. My only response is on the implementation that we do have 10,000 examples in the last 3 years, and as a matter of fact, we in the environmental community could pick out a few bad ones. We could go the other way and show examples of activities taking place where we had questions about those activities. Where that has been the case it has been argued that we like everybody else in America has to exercise their legal rights and say this agency acted arbitrarily.

Mr. TAUZIN. Just as it took 3 years to get alligators off of this that should not have been on, and I would say it takes 2 or 3 years to get a species on that belongs there. There needs to be some work on this act in terms of doing something for these rather strange aberrations that occur.

I want to get into one thing. My time is limited. Mr. Carlton made Mr. Hall's statement, and made a point of the fact that in one case one company that he represents had a situation where \$9 million worth of timber were, in effect, registered unharvestable because of the presence there of some 80 nests of bald eagles.

Given the national determination to protect the bald eagle, as well we should, is it fair to ask that individual in our society that he suffer a \$9 million-plus cost for the sake of our society making a judgment that bald eagles ought to be protected? Who ought to bear that \$9 million cost?

Mr. BERLIN. The economic argument for making that individual bear the cost is he is causing external diseconomies from his—

Mr. TAUZIN. Causing what?

Mr. BERLIN. Causing diseconomies. His activities are adversely affecting the environment, and having said that, I do not and we do not object to having the forest products industry develop some sort of tax relief for those people. People involved in polluting industries who have to bear a cost of putting in pollution control devices do get tax relief.

Mr. TAUZIN. I am talking generally, when society makes a decision to protect the bald eagle and someone in our society has to give up some of their property rights, the right to use and enjoy their property, or perhaps that property becomes worthless as a result of that decision, do we not as a society owe that person compensation? Have we not taken his property without compensation, which I thought was forbidden?

Mr. BERLIN. We have not taken it without compensation.

Mr. TAUZIN. Why not?

Mr. BERLIN. Because there is a long history of legal cases that particularly point to that example. We are not necessarily diminishing the use of his property sufficiently to result in a taking. Having said that, and that is the situation in every environmental statute, private individuals have to bear costs at times. The reason I think is that they, in a sense, cause the problem. They are the ones cutting down the forests, and it is their own private land, but we say that as part of the cost of their making their profits, they have to start internalizing that cost to society. The cost to society is cutting down the area where the nest trees are found. That is why economically this Congress and other Congresses have passed the provisions on the environment they have passed.

Having said that, we support the concept of providing relief to these people. If the forest products industry will come up with a tax bill on that, we will support it.

Mr. BREAUX. I thank you.

Following up on Mr. Tauzin's questioning with the *South Dakota* case. The Commissioner of Agriculture or Secretary of Agriculture is from that State. He appeared before this hearing just last week, and I asked him the very question about the exemption process, and had they pursued the exemption process. He expressed a complete unawareness that it was even there. That was very shocking for this committee to have the person in charge of the program complain what he could and could not do, and when I asked him what was the result of the exemption process, basically what I got back was "what exemption process." I requested that he go back

and read the whole act. Maybe it does not work, but at least give it a shot.

Congressman Sunia, any questions?

Mr. SUNIA. Mr. Chairman, I have a feeling if we do not stop and go to lunch, we may be endangered. [Laughter.]

Mr. BREAUX. Some of us have provisions to carry on a long time.

Mr. SUNIA. In that case, may I ask one question?

I just wanted to ask Mr. Lamberton, do States regularly submit lists with requests to be added to the big list?

Mr. LAMBERTSON. Well, sir, that varies. Some States have very active programs, they have worked with the Nature Conservancy and others to develop their own list of candidate species. Yes, some States do actively support listing of species, send in petitions and take other actions to encourage us to list species. Other States as the gentleman from Nature Conservancy mentioned are just starting their inventory processes and do not know what they have in the way of endangered resources.

Mr. SUNIA. Is it one of your activities to coordinate, to make certain that there was not a great deal of dual concern about a point raised in here where it may be rare somewhere but plentiful elsewhere?

Mr. LAMBERTSON. Before we would propose a listing of a species as endangered or threatened, we would want to make sure we had a comprehensive status survey so we knew where that species occurred in what numbers. We do coordinate very closely with the State agencies at this stage.

Mr. SUNIA. When the panel makes its consideration based on the economic analysis, do they not, in fact, weigh that against the biological analysis as well?

Mr. LAMBERTSON. You are talking about the exemption process?

Mr. SUNIA. Yes.

Mr. LAMBERTSON. By the time the exemptive process is triggered, it has already been established whether the project is going to wipe out a species. The only question for the exemption committee to decide is whether to have the species or the project. It is a public-interest determination.

Mr. SUNIA. Thank you.

Mr. BREAUX. I would like to thank this panel for their being with us this morning. This panel is excused. This afternoon the committee will take up our third panel.

The committee will now be in recess until approximately 2 p.m. [Whereupon, at 1:10 p.m., the subcommittee recessed, to reconvene at 2 p.m., the same day.]

AFTERNOON SESSION

Mr. BREAUX. The subcommittee will please be in order. We will continue our hearings.

We would like at this time the panel before us consisting of Mr. Richard Roe, Acting Director of the Office of Marine Mammals and Endangered Species; Carl Savit, senior vice president of Western Geophysical Co., representing the National Oceans Industry; Dr. John Cagnetta, vice president of nuclear and environmental engineers from the Northeast Utilities Co., representing the Edison In-

stitute; Dr. James Tate, who is vice chairman of the endangered species ad hoc committee of the Western Regional Council; and Mr. Patrick Parenteau, vice president of the resources conservation department, for the National Wildlife Federation.

Gentlemen, we welcome all of you to our panel this afternoon. Mr. Roe, if you would like to begin. I understand you have a short statement. We will start with you.

STATEMENT OF RICHARD ROE, ACTING DIRECTOR, OFFICE OF MARINE MAMMALS AND ENDANGERED SPECIES, NATIONAL MARINE FISHERIES SERVICE; CARL SAVIT, SENIOR VICE PRESIDENT, WESTERN GEOPHYSICAL CO., REPRESENTING THE NATIONAL OCEANS INDUSTRY; JOHN CAGNETTA, VICE PRESIDENT, NUCLEAR AND ENVIRONMENTAL ENGINEERS, NORTH-EAST UTILITIES CO., REPRESENTING THE EDISON INSTITUTE; JAMES TATE, VICE CHAIRMAN, ENDANGERED SPECIES AD HOC COMMITTEE, WESTERN REGIONAL COUNCIL; AND PATRICK PARENTEAU, VICE PRESIDENT, RESOURCES CONSERVATION DEPARTMENT, NATIONAL WILDLIFE FEDERATION

STATEMENT OF RICHARD ROE

Mr. ROE. Thank you, Mr. Chairman.

I appreciate the opportunity to participate in the reauthorization process of the Endangered Species Act. I have a prepared statement which has been handed out, I believe. Let me summarize from that very quickly.

The Department of Commerce is charged with carrying out this nation's commitment to managing and conserving our living marine resources, including endangered and threatened marine species.

That responsibility has been delegated by the Secretary through the National Oceanic and Atmospheric Administration to the National Marine Fisheries Service. Later this afternoon Mr. William Stevenson will be speaking on behalf of the Department.

I would like to briefly address the section 7 portion of the act. Since 1978, the National Marine Fisheries Service has received 1,076 requests for consultations pursuant to section 7.

Most of these requests required only informal consultation and did not involve preparation of a biological opinion. However, there were 124 formal consultations, of which 94 resulted in no jeopardy biological opinions. In 12 opinions, there was insufficient evidence to determine the likelihood of jeopardy to the species involved, and 18 biological opinions found jeopardy.

Reasonable and prudent alternatives were offered for all insufficient information and jeopardy opinions. Except for one case, involving the Pittston Refinery the the Northeast, our reasonable, prudent alternatives were adopted and the projects were implemented as modified.

Although the consultation process has resulted in modification of a number of projects, NMFS has not been involved in a consultation that prevented a proposed project from being implemented.

Staff members of NOAA have worked closely with the Department of the Interior to develop joint regulations implementing the

1978 and 1979 amendments to the act, including amendments to the consultation process.

The section 7 regulations are in draft form and have been reviewed by Federal agencies. We hope the promulgation of these regulations will expedite the consultation process and clarify a lot of the difficulties I have been listening to on section 7.

In regard to the exemption process, we have had very little or no experience. I am at a loss today to assess adequately whether or not the regulations implementing the process have worked.

However, just let me caution that we feel the consultation process and exemption process have encouraged Federal agencies to consult in good faith to resolve conflicts, rather than seek exemptions. We think that is healthy and supports the intent of the act.

With those introductory comments, I would like to conclude my statement this afternoon and be available for questions at the appropriate time.

Thank you.

Mr. BREAUX. Thank you. We do have questions.

[The statement of Mr. Roe follows:]

PREPARED STATEMENT OF RICHARD B. ROE, ACTING DIRECTOR, OFFICE OF MARINE MAMMALS AND ENDANGERED SPECIES, NATIONAL MARINE FISHERIES SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE

Mr. Chairman and members of the subcommittee, I am Richard B. Roe, Acting Director, Office of Marine Mammals and Endangered Species, National Marine Fisheries Service, National Oceanic and Atmospheric Administration. Thank you for this opportunity to participate in the reauthorization process for the Endangered Species Act.

The Department of Commerce is charged with carrying out this nation's commitment to managing and conserving our living marine resources including endangered marine species. This responsibility has been delegated to the National Oceanic and Atmospheric Administration's National Marine Fisheries Service.

SECTION 7

The consultation requirements of section 7 were modified by amendments made to the Act in 1978 and 1979. Section 7(a)(2) of the Act requires all Federal agencies, in consultation with and with the assistance of the Secretary of the Interior or Commerce, to ensure that any action authorized, funded, or carried out by that agency is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat.

Since 1978, NMFS has received 1,076 requests for consultations pursuant to section 7. Most of these requests required only informal consultation, which does not involve the preparation of a biological opinion. There were 124 formal consultations of which 94 resulted in "no jeopardy" biological opinions, 12 concluded that there was not enough information to ensure no jeopardy to the listed species involved, and 18 biological opinions found "jeopardy." Reasonable and prudent alternatives were offered for all "insufficient information" and "jeopardy" opinions. Except for one case, our reasonable and prudent alternatives were adopted and the projects were implemented as modified. Although the consultation process has resulted in modification of a number of projects, NMFS has not been involved in a consultation that prevented a proposed project from being implemented.

Our agency has worked hard to conduct meaningful consultations and to develop sound biological opinions that help other Federal agencies to discharge their responsibilities without violating the provisions of the endangered Species Act.

Staff members of NOAA have worked closely with the Department of the Interior (Fish and Wildlife Service) to develop joint regulations implementing, in 1978 and 1979, amendments concerning the consultation process. These regulations are in draft form and have been reviewed by other Federal agencies. Promulgation of these regulations will further expedite the consultation process.

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EXEMPTION

The NMFS, in conjunction with the Fish and Wildlife Service, promulgated regulations governing the application procedures and criteria for obtaining an exemption from the provisions of sections 7 and 9 of the Act from the Endangered Species Committee. We have little experience with the exemption process and cannot adequately assess whether the regulations or the process have worked well. We believe that the Act's elaborate exemption process has encourage Federal agencies to consult in good faith to resolve conflicts rather than seek an exemption.

Mr. BREAU. We will next ask Mr. Carl Savit to present his testimony.

STATEMENT OF CARL SAVIT

Mr. SAVIT. Thank you, Mr. Chairman.

I want to thank you and the committee for allowing me to testify on behalf of the geophysical industry and National Ocean Industries Association on an issue that is of considerable importance to us.

I have submitted a prepared statement, which with your permission I shall not read. I shall simply comment on some aspects of that statement by presenting the type of problem that concerns us and shall give voice to the nature of our concerns.

Basically, we are concerned with the way in which the Endangered Species Act has been enforced and has been implemented, particularly with respect to prevention of otherwise legitimate activities on the basis of mere supposition and imaginary objections.

I would point out, for example, that if one finds one's self upon a criminal jury and listens to the charge of the judge, the judge will say, "If you find that the evidence is so strong that you feel that the defendant is guilty beyond a reasonable doubt, you must convict him."

"A reasonable doubt means a doubt based on reason. Mere supposition or possible or imaginary doubts, are not to be considered. Yet, under the Endangered Species Act, the way it has been enforced, imaginary and possible doubts as to the safety of a species have been used to prevent otherwise legitimate operations and to cause considerable monetary damage.

The particular instance that I will recount, and whose background I will also outline, should illustrate the kind of concern that we seek.

Last season seismic operations in exploration for oil and gas were conducted along the north coast of Alaska. Normally those operations are conducted by small ships which makes sounds in the ocean by discharging compressed air into the water. Those sounds are considered to be quite loud, and they are in fact loud.

The operations can only be conducted when the ice has pretty well cleared out of the area. So, in general, in a very good season we may get as many as 40 ice-free days during the late summer.

On the average, we can expect to get a 40-day season but once in 4 years. The ships that go up there to do this work have to be brought in the season before, so that they can get around Barrow, and sometimes they have to wait an extra year to get around Barrow because the ice doesn't clear enough to get past.

The staging of an operation in that area is extraordinarily expensive. One season, one of the oil companies for which we operated

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required data that particular season and could not afford to take the gamble of taking a ship around Barrow.

So, we designed and built an 85-foot ship that could be dismantled and loaded, part by part, into airplanes, flown up to Alaska and reassembled up there.

The cost of such an operation is obviously considerable, but it gives a clear understanding of the cost of staging operations in that area. On the average, a geophysical crew operating in that area represents the expenditure of about half a million dollars per day per crew.

Last season an advisory was received by the Department of Interior from National Marine Fisheries to the effect that seismic operations should be prevented from taking place during seasons when the bowhead whale was supposed to be migrating from one end of the Beaufort Sea to the other.

The information did not have any clear evidence of any sort that would indicate that seismic operations would prevent or even hinder the bowhead whale in its migrations. It simply supposed that this might happen.

After consultation between the Interior Department and Commerce Department, a regulation came out that allowed us to operate provided that we flew reconnaissance to make sure there were no whales in the area during our operations.

All of this was very well and good, except that a day came along when the weather was not sufficiently good to allow the airplane to fly. It was good enough for the ships to go out, but the ships were prevented from going out because we could not make sure that the area was clear of whales.

No whale had been seen during any of the reconnaissance, either before or, as a matter of fact, after this situation. Four ships were shut down for 1 day. Four ships, half a million dollars, a 1-day, \$2 million loss, on the possible supposition that if they had been operating, somehow or other one or more bowhead whales would have been prevented from making that trip.

There is a considerable body of evidence as to the loudness of sounds that we make, the loudness of sounds that bowhead whales make, the hearing acuity patterns of bowhead whales and so on.

It is also very well-known that bowhead whales do not travel down a route which is like I-95. They travel a route that can vary in width from 20 miles to 200 miles, depending upon ice conditions and the presence of one or another factor that normally affects a whale.

The whales are quite accustomed to taking 50-mile detours to go around icefloes. Yet, it is supposed that for some reason or another the sounds that we make would disturb them so much that they would not be able to go around us and that they would thereby commit suicide by going back and not making their migrations.

This kind of evidence could never be considered in any court of law or in any other forum than that which is provided under the Endangered Species Act as it has been written. So, in view of this kind of a situation, what we are asking is that some burden be placed on those who allege possible harm to an endangered species so that some reasonable evidence need be presented before legitimate commercial operations are interdicted.

Thank you, Mr. Chairman.

Mr. BREAUX. Thank you very much for your presentation, Mr. Savit.

[The statement of Mr. Savit follows:]

PREPARED STATEMENT BY CARL H. SAVIT, SENIOR VICE PRESIDENT, WESTERN GEOPHYSICAL CO., ON BEHALF OF NATIONAL OCEAN INDUSTRIES ASSOCIATION

INTRODUCTION

Good morning, Chairman Breaux, and members of the Subcommittee on Fisheries and Wildlife Conservation and the Environment. I am Carl H. Savit, Senior Vice President of Western Geophysical Company. Today I will be testifying both for Western Geophysical and for the National Ocean Industries Association.

Western Geophysical Company operates more than twenty vessels on waters over the United States outer continental shelves. We explore for oil and gas by methods that have been proved to be environmentally safe and innocuous to wildlife. We are particularly concerned that the Endangered Species Act has been and is being used to place an enormous monetary burden on our industry without reasonable cause. Mere supposition can, under the Act, serve as a basis to shut down a geophysical survey that may have required years of preparation and the investment of many millions of dollars.

We heartily endorse the purposes of the Act and have taken positive steps to avoid endangering any wildlife. We, however, urge that the Act be amended to make its application reasonably predictable and clearly based on rational processes and factual data.

The National Ocean Industries Association, NOIA, is a national trade association representing nearly 500 American companies engaged in all aspects of ocean-related commercial activity. As a consequence, many NOIA member companies from time to time encounter constraints based on the Endangered Species Act (ESA) in planning for and conducting their resource development operations.

I shall direct my comments today to several parts of the ESA which need either substantive revision or modification of regulatory interpretation or enforcement practices. First I shall briefly note each point on which Western and NOIA feel changes may be appropriate, and then I will recount for you an example of how the Act, as now written and applied, has placed the offshore industry in serious jeopardy and has needlessly handicapped the development of the energy resources of the United States.

TOPICS FOR POSSIBLE AMENDMENTS TO THE ACT

The Definition of "Conserve".—This definition, in subsection 3(3), is unnecessarily limiting. We believe there may be cases where regulated taking is appropriate, and should be permitted, even when that taking is not based on population pressures within a particular ecosystem. Compromise programs should be considered as a balancing factor, where a species may be enhanced artificially in one location to offset a regulated taking in another location.

The Definition of "Species".—The manner in which "species" is defined in subsection 3(16) is unnecessarily broad. Inclusion in every case of subspecies and distinct population segments may go beyond the level of protection necessary to ensure the continued well-being of "species," and at the same time impose tremendous economic burdens in some instances. We believe "species" should be defined by the accepted scientific standard, that is, "a fundamental category of taxonomic classification, ranking after a genus, and consisting of organisms capable of interbreeding."

The Definition of "Take".—The term "take" in subsection 3(19) does not establish a clear standard for what is meant by "harm" to a species. As the Act has been applied, this absence of a clear standard has resulted in unnecessary costs of substantial magnitude in the geophysical industry, and likely for other businesses as well. The connection between exploration activities and the survival of endangered species is tenuous at best, but the Act has been used to restrict or ban such activities based solely on concatenations of speculation and unfounded allegations. Also, because inadvertent "taking" may result in very substantial penalties, it seems appropriate as a matter of fundamental fairness to modify the definition of "take" to exclude verifiably accidental harm, or, alternatively, to alter the ESA's penalty provisions to ensure that innocent or unintentional incidents do not result in penalties. As the ESA is now written and applied, it may result in significant "lost opportuni-

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ty" costs, as a consequence of avoidance of even good faith efforts for fear of penalties.

"Listing" of Species.—Under section 4 of the ESA, the process of "listing" a species as being endangered or threatened should be modified somewhat, to ensure that all potentially affected government and private bodies are permitted to present their views on a proposed listing decision. Some form of public meeting or hearing process should be required in advance of every listing decision, with the interested public having ample notice of proposed actions and of their opportunity to provide statements or evidence bearing on those actions.

"Delisting" of Species.—The decision to remove a species from the "endangered" or "threatened" list, and the process to arrive at that decision, should be simplified. It seems appropriate to take into account in making a "delisting" decision any actions which have led to artificial enhancement or propagation of the species in question. That is, it seems there should be the opportunity to consider a "trade off" of some degree of risk to a species in one location, in exchange for comparable levels of artificial enhancement in another location, so that agency actions might be authorized on the basis of allowance being made for overall expansion of a species.

Critical Habitat Designation.—Section 4 requires the Secretary to designate "to the maximum extent prudent" any habitat of a species considered to be critical to the species, at the time the species is listed under the Act. But "maximum extent prudent" is a vague standard at best, and leaves open the prospect for unduly large areas to be set aside as allegedly "critical" with no meaningful standard of review available to challenge an excessive designation.

Habitat designation "to the extent necessary to achieve the purposes of the Act" would better balance the EPA's restrictive effects with its affirmative objectives. Application of this standard should be based on demonstration of the need for delineation of a particular area, to justify the action in advance of listing. Also, the Act might usefully provide for state or federal purchase of absolutely critical habitat areas, as a means to more broadly distribute potentially adverse economic effects of habitat designations.

"Jeopardy" Determinations.—The section 7 standard for determining when an agency action will place a listed species or habitat in jeopardy could usefully be restated, to require that agencies "fully consider" actions which may affect listed species or habitats, or that actions taken will be consistent with the purposes of the Act "to the maximum extent practicable." The existing standard is arguably broader than necessary to achieve the objectives of the Act.

As the jeopardy standard is now written, it is not clear that an agency, after finding that a proposed action will not jeopardize a listed species or habitat, must issue the license or permit which gave rise to the "jeopardy inquiry." So long as the Act's legitimate purposes are met, it should not be possible for an agency or other party to manipulate the Act to frustrate a proposed action.

Citizen Suits under Section 7.—Under subsection 7(n), "any person" may commence litigation to challenge an exemption decision taken by the Endangered Species Committee under the provisions of subsection 7(h). This provision offers no protection whatever to the prospective permittee or licensee whose operations may be delayed or outright blocked by litigation. Delay alone can impose major cost burdens, and in some cases delay from litigation will force a company to forego operations entirely. For example, in the Arctic, a delay of one month in use of a geophysical vessel, at the beginning of the summer ice-free period can easily mean that the vessel will be idled for two or three years until open water again appears. Such a delay can cost the geophysical contractor many millions of dollars.

If "citizen suits" are to be permitted, it seems only fair to impose a burden on plaintiffs in such cases to establish their bona fide interest in the case, and perhaps to post some form of good faith bond to ensure that frivolous litigation will not be undertaken merely to harass or delay.

EXPERIENCE IN ARCTIC WATERS THROUGH 1981

Geophysical surveys have been conducted over the northern continental shelf of Alaska, east of point Barrow, for more than a dozen years. Such surveys involve the use of relatively small ships that are brought around point Barrow in the early summer when the ice clears and there is enough open water for a safe transit. Some years the ice does not open up enough to permit the trip and the ship must wait until the next summer.

Most of the ships that make it remain east of Barrow for several seasons.

The potential survey area extends nearly 400 miles from Barrow to the Canadian border and extends seaward 50 to 100 miles or more. Some years the clear area does

not extend more than about 120 miles from the coast. About once in four years the entire prospective area is ice-free to as much as 200 miles from the coast.

Generally, operations can begin about the beginning of August and must be closed down about the end of September. Occasionally the open season may be a few weeks longer, often substantially shorter.

On July 30, 1981, pursuant to the Act, the National Marine Fisheries Service made the following recommendation to the Department of the Interior:

"The National Marine Fisheries Service recommends that the Department of the Interior use its authority to prohibit acoustical geophysical actions in the lease sale area from September 1 to October 31 east of Prudhoe Bay and from September 15 to October 31 west of Prudhoe Bay in order to fully protect the Bowhead whale during its fall migration. Although these dates reflect the usual timing of the fall migration, the advent of the migration may vary from year to year, sometimes occurring earlier and sometimes later. The USGS should require permittees to suspend operations if the whales reach the project area prior to the September date. The USGS could allow extensions beyond the September dates if the whales have not reached the project area. We recommend that such extensions be granted only if aerial surveys are being conducted that will identify when the whales are likely to be present in the project area, or would show whether the normal migration of the whale is being disrupted. The National Marine Fisheries Service recommends that the USGS coordinate such a monitoring program with the Alaska regional office."

The recommended extensions were granted and the aerial surveys were instituted. Unfortunately, when the weather was not sufficiently clear to permit adequate visibility for whale detection from the air, the ships were not permitted to operate. During all of the clear weather not one bowhead whale was sighted.

The lost time represented a monetary loss of several millions of dollars.

An examination of the reasoning and the evidence upon which the recommended restrictions were based discloses that:

1. There is no evidence that geophysical operations disturb bowhead whales but there is speculation that those operations could conceivably have some effect.

2. There is no evidence that even a major disturbance would deter a whale from continuing its migration but such deterrence is implicitly assumed.

3. In all cases where whales of various species have been known to have encountered human obstructions to their migrations, they have simply found a path around the obstructions. In this case, the bowheads are assumed to be unable to go around even though they habitually successfully make drastic changes in their normal routes when ice barriers obstruct their travel.

Incidentally, the area of "loud" sound around an operating geophysical survey vessel is at most a few miles across, leaving undisturbed passageways on each side many miles in width.

Under no stretch of the imagination could so tenuous a chain of speculation be used to impose a multimillion dollar penalty under any other law. We ask, therefore, that the Act be amended to require that actual evidence of a potential impediment to the continued survival of a species be required before legitimate productive activity is enjoined. We are concerned that, absent such a change, even more restrictive conditions could be imposed under the Act next summer and in the ensuing years.

Mr. BREAUX. Next we would like to have Dr. John Cagnetta.

STATEMENT OF JOHN P. CAGNETTA

Mr. CAGNETTA. Thank you.

Mr. Chairman, I would like to thank you and the members of the subcommittee for the opportunity to speak to you today regarding the reauthorization of the Endangered Species Act. I am vice president of the Nuclear and Environmental Division of Northeast Utilities. That is a minor correction to the title given on the announcement sheet. Northeast Utilities is the parent company of the largest combination electric and gas company in New England. Northeast Utilities is a member of the Edison Electric Institute, which is an association of investor-owned electric utility companies in the United States. The Edison Electric Institute has prepared a separate statement for the record in these proceedings and is submit-

ting it to the clerk. I will discuss in detail one of the matters addressed in the Edison Electric Institute statement.

I am responsible for the direction and supervision of Northeast Utilities' nuclear and environmental programs, including the environmental programs for all of our power facilities, both nuclear, fossil and hydroelectric, that are under construction and in operation. One of the environmental programs which I oversee includes successful fish passage facilities on the Connecticut River. I am here today to propose a single change in the wording of the Endangered Species Act that would remove a troublesome contradiction. This contradiction, which is found in sections 7 and 9, became evident to Northeast Utilities during the licensing of a proposed nuclear plant.

Presently when the Secretary of the Interior or the Secretary of Commerce issues a no-jeopardy opinion under section 7 of the act, a permit applicant proceeds with his proposed project at his own peril. Under a literal reading of section 9, that prohibits the taking of a species, an accidental taking of one egg or larva of any endangered species could be treated as a violation, regardless of the outcome of the section 7 consultation. The mere possibility that a court might interpret section 9 in this manner may be enough to prevent an applicant from proceeding. In effect, a concern about the interpretation and application of section 9 renders section 7 meaningless.

Our overriding concern is one of double jeopardy. A utility wishing to construct a nuclear plant must obtain approvals from a number of Federal agencies, including the Nuclear Regulatory Commission and Environmental Protection Agency. Even if a nuclear plant applicant obtains a no-jeopardy opinion in section 7 consultation, and even if the Nuclear Regulatory Commission and Environmental Protection Agency issue all of the approvals required for construction and operation of the plant, section 9 will continue to haunt the utility. Once a plant was fully built and operational at a cost in excess of \$2 billion, a private party could bring suit to enjoin the operation of the plant on the grounds of violation of section 9. The electric industry simply cannot afford the risk.

The remedy we propose would be to change the wording of the act to state that any action taken in accordance with opinion rendered by the Secretary in a section 7 consultation would be exempt from the prohibitions of section 9.

I am submitting with my prepared statement proposed language we believe would eliminate the contradiction. Our proposed amendment would bring about the following result: If the Secretary issued a no-jeopardy opinion, the project would be permitted to proceed without further risk under section 9 of the act. Similarly, if the Secretary suggested reasonable and prudent alternatives to the proposed course of action pursuant to section 7 of the act, and the applicant agreed to adopt one of these alternatives, the project would proceed without further risk under section 9.

With regard to our specific experience with regard to the contradiction between sections 7 and 9, it surfaced during the planning phase of a nuclear powerplant construction project near the Connecticut River in Montague, Mass. Northeast Utilities had applied to the NRC under the Atomic Energy Act for a construction permit

and to the Environmental Protection Agency under the Clean Water Act for a discharge permit and for approval of the location and design of the makeup water intake structure. The makeup water intake structure was to be located on the Holyoke pool of the river. Our studies of the pool revealed the presence of the short nose sturgeon, which is on the endangered species list. The plant was to be built with cooling towers and other equipment that would employ state-of-the-art technology to minimize any impacts on the river. As a result, adverse impacts on the short-nose sturgeon population would be highly unlikely.

The presence of the short nose sturgeon in the Holyoke pool prompted a request from the NRC and EPA for a consultation with the National Marine Fisheries Service pursuant to section 7 of the act. Before the consultation could be completed, indeed early in its review of our application for a discharge permit, EPA articulated in letters to Northeast Utilities two conclusions:

First, EPA had concluded that section 9 of the act constituted a zero-taking rule, which would prohibit the entrainment or impingement of any short nose sturgeon eggs or adults by the Montague intake structure. This interpretation of section 9 required us to prove a negative; that is, we had to demonstrate that we would never entrain a single short nose sturgeon or larva or impinge a single adult. That is an impossible task.

Second, EPA had determined that it had serious doubts about whether it could issue any approvals under the Clean Water Act regardless of the outcome of the section 7 consultation. If the activity being authorized would result in takings prohibited under EPA's strict interpretation of section 9, they couldn't do it. This would have made the section 7 consultation pointless. Excerpts from the EPA letters in which these positions were expressed are included in my prepared statement. Partly because of these problems of interpretation, we suspended the licensing efforts for the Montague plant in 1978. Additional factors influencing this decision were financial constraints, the decline in the demand for power and the difficulties in convening a joint hearing between the NRC and the Massachusetts Energy Facilities Siting Council.

The plant was canceled in 1980. We believe the uncertainty about the operation of sections 7 and 9 was a significant factor in our failure to obtain a ruling on the suitability of the Montague site for a nuclear facility.

Our experience with this act clearly shows a need for clarification of the type that we are proposing.

Thank you.

Mr. BREAUX. Thank you very much, Doctor.

[The statement of Mr. Cagnetta follows:]

PREPARED STATEMENT DR. JOHN P. CAGNETTA, VICE PRESIDENT, NUCLEAR AND ENVIRONMENTAL ENGINEERING, NORTHEAST UTILITIES

INTRODUCTION

Mr. Chairman, I want to thank you and the members of the Subcommittee for the opportunity to testify today regarding the reauthorization of the Endangered Species Act. My name is Dr. John P. Cagnetta and I am Vice President of the Nuclear and Environmental Division of Northeast Utilities. I am responsible for the direction and supervision of Northeast Utilities' nuclear engineering and environmental pro-

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grams, including the environmental programs for all of our nuclear, fossil and hydro-electric power plants under construction and in operation.

One of the environmental programs which I oversee includes the most successful fish passage facility for shad and salmon on the Atlantic seacoast. That facility, and some of Northeast Utilities' other successful environmental programs, are described more fully in an attachment to my testimony.

Northeast Utilities is the parent company of the Connecticut Light and Power Company, The Hartford Electric Light Company, Western Massachusetts Electric Company and Holyoke Water Power Company. The system furnishes electric service to approximately one million customers in Connecticut and western Massachusetts and retail gas service to approximately 150,000 customers in Connecticut. The companies of the NU system own approximately 5,800 MW of generating capacity located in Connecticut, Massachusetts, New Hampshire, Vermont and Maine, including approximately 2,000 MW of nuclear capacity, 2,600 MW of fossil capacity and 1,200 MW of hydro-electric capacity.

I am here today to propose a single clarification to the Endangered Species Act. This clarification would remove a troublesome contradiction from the Act. That contradiction, which is found in Sections 7 and 9, became evident to Northeast Utilities during the licensing activities for a proposed power plant.

THE PROBLEM: THE "DOUBLE JEOPARDY" RISK UNDER SECTION 9

Section 7 provides for a consultation process between federal agencies prior to any federal action that might affect the continued existence of an endangered or threatened species or the critical habitat of such species. However, a favorable consultation under Section 7 does not insure that project will proceed without further risk under the Act.

Under present law, even if the Secretary of the Interior or the Secretary of Commerce has issued a "no jeopardy" opinion regarding a proposed project, the permit applicant proceeds at his peril. A favorable consultation under Section 7 does not free the applicant from the strict prohibitions of Section 9 of the Act. Section 9, which prohibits the "taking" of any endangered species, operates independently of Section 7. Under a literal reading of Section 9, and accidental taking of one egg or larva of an endangered species could be treated as a violation of Section 9, regardless of the outcome of the Section 7 consultation. The mere possibility that a court might interpret Section 9 in this manner may be enough to prevent the applicant from proceeding at all with its project. In effect, the concern raised by Section 9 renders Section 7 procedures meaningless.

THE REMEDY

The remedy for this statutory contradiction would be to clarify the Act to provide that any action taken in accordance with an opinion rendered by the Secretary in a Section 7 consultation would be exempt from the prohibitions in Section 9. Later in my testimony I will suggest language that we believe would accomplish this goal.

OUR EXPERIENCE WITH THE ACT: THE MONTAGUE PROJECT

I am here today to describe an example of the problems caused by the lack of coordination between Section 7 and Section 9. This example is based upon a series of incidents that occurred when Northeast Utilities and other New England utilities were planning the construction of a nuclear power plant near the Connecticut River in Montague, Massachusetts.

Northeast Utilities had applied to the Nuclear Regulatory Commission ("NRC") under the Atomic Energy Act for construction permits for the plant. We had also applied to the Environmental Protection Agency ("EPA") under the Clean Water Act for a discharge permit and for approval of the location and design of the makeup water intake structure. Although the NRC nominally has jurisdiction over aquatic impacts under the National Environmental Policy Act, in practice it defers largely to EPA's analysis. Under procedures of the NRC which are designed to inform applicants as early as possible of the suitability of proposed nuclear sites, we had also applied to the NRC for an early "site suitability" ruling. We had hoped to obtain a definitive finding from all of the agencies having jurisdiction that the Montague site was an acceptable site from an environmental point of view.

The makeup water intake structure for the Montague plant was to be located on the Holyoke Pool of the Connecticut River. During our aquatic studies, it was determined that the Shortnose Sturgeon was present in the Holyoke Pool. This species has been on the endangered species list since 1967. However, the plant was to be

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built with cooling towers and other equipment which would employ state of the art technology to minimize impact on the river, and we believed that it was very unlikely that there would be any adverse effect on the Shortnose Sturgeon population.

Nevertheless, early in its review of our application under the Clean Water Act, EPA began to develop the troublesome position that bring us here today. While we disagree with the position taken by EPA in the Montague proceeding, we recognize that EPA's position was the product of a good-faith effort to administer a statute which, by its own terms, absolutely prohibits "takings."

The application was being reviewed by the Power Plant Review Group based at the EPA's Region I office in Boston. In 1977, the Power Plant Review Group sent the Montague applicants a letter containing the following statement:

"The Power Plant Review Group has recommended that EPA disallow any intake structure in the Holyoke Pool, pursuant to EPA's responsibilities under the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.*, and the Endangered Species Act, 16 U.S.C. § 1531 *et seq.*, because of the potential impact that an intake structure would have on the Shortnose Sturgeon. *Since this species is on the endangered list, EPA cannot issue a permit authorizing the taking of the species.* If the applicant opposes this recommendation, a detailed showing of proof that no sturgeon (adult, larvae, or eggs) will be taken as a result of the operation of the proposed intake structure is required (emphasis added)."

This position was reiterated in a letter sent to the Montague applicants in 1978 which contained the following statement:

"Concerning the possibility of Shortnose Sturgeon mortalities, it is still the power plant review group's position that no intake structure can be allowed in the Holyoke pool because of predictable egg and larva entrainment. This question has been certified to EPA's Office of General Counsel for advice."

The "certification" referred to in the EPA letter was actually a request for an advisory ruling from EPA's Office of General Counsel in Washington on the applicability of the Act to EPA permit determinations. In a letter to the Montague applicants, the Region I Office of EPA indicated that the question on which it was seeking the advisory ruling was as follows:

"Must EPA, in making 316(b) and other NPDES determinations for the Montague facility, a new source, refuse to license the facility at the proposed location if the Agency concludes that licensing the proposed activities will result in the taking of Shortnose Sturgeon, an endangered species? The issue is whether a predictable reduction in an endangered species caused by an intake structure constitutes a "taking" under the Endangered Species Act and further, whether the "taking" prohibition in the Act applies to EPA's permitting action here. I am requesting your opinion because such an interpretation has implications for siting of facilities other than the project we are presently reviewing."

To our knowledge, no formal advisory ruling was ever received from EPA's Office of General Counsel, although the Region I office apparently did receive preliminary informal advice that its position on Section 9 may have been somewhat extreme.

About the same time that this correspondence with EPA took place, the NRC and EPA initiated a Section 7 consultation with the National Marine Fisheries Service ("NMFS") to determine whether the operation of the Montague plant would jeopardize the continued existence of the Shortnose Sturgeon or result in the destruction or adverse modification of its critical habitat. However, by this time it was clear from discussions and correspondence with EPA that it had already drawn two conclusions. First, EPA had concluded that Section 9 of the Act constituted a "zero taking" rule which would prohibit the entrainment or impingement of any Shortnose Sturgeon eggs, larvae or adults by the Montague intake structure. Second, EPA had determined that it had serious doubts about whether it could issue any approvals under the Clean Water Act, regardless of the outcome of the Section 7 consultation, if the activity being authorized would result in "takings" which were prohibited under its strict reading of Section 9 of the Act.

Several months later, the consultation process with NMFS bogged down in a series of requests for burdensome studies. Those studies were not performed primarily because we believed that such expensive and time-consuming efforts could not be justified in light of EPA's position on Section 9. If EPA felt that Section 9 was a bar to the approval of our application under the Clean Water Act, the outcome of the Section 7 consultation was obviously irrelevant. The consultation was never completed.

The licensing effort for the Montague plant was finally suspended in mid-1978. There were a number of reasons for this suspension. These included financial constraints, a decline in the demand for power and difficulties in commencing a joint hearing between the NRC and the Massachusetts Energy Facilities Siting Council,

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as well as the problems which we had encountered in resolving the Shortnose Sturgeon issues. We believe that the uncertainty about the operation of Section 7 and Section 9 was a significant factor in our failure to obtain a ruling on the suitability of the Montague site.

The Montague plant was cancelled in 1980. Although the Montague site still remains a prime location for an electric generating station, its use for that purpose is severely limited due to the presence of the Shortnose Sturgeon and uncertainty about the application of the Act.

THE LESSONS OF MONTAGUE

Looking back on the Montague experience, the positions taken by EPA in 1977 and 1978 are instructive for two reasons. First, EPA's interpretation of Section 9 requires an applicant to prove a negative. Because EPA read Section 9 as a "zero taking" rule, if we wanted EPA's approval under the Clean Water Act we had to demonstrate that we would never entrain a single egg or larva or impinge a single adult. Obviously, it is impossible to make such a showing.

Second, the EPA position rendered the Section 7 consultation process meaningless. EPA had serious doubts about whether it could approve an activity which would result in "takings" under its strict reading of Section 9. If EPA felt that it could not issue any approval due to Section 9 even if we had obtained a favorable Section 7 consultation, then the consultation would be a pointless ritual.

THE DOUBLE JEOPARDY RISK

Our problems with the Act transcend our experiences with EPA. The "double jeopardy" risk was our overriding concern. Even if we had obtained a "no jeopardy" opinion from NMFS in the Section 7 consultation, and even if EPA had approved our intake structure, and even if the NRC had issued a construction permit and later an operating license, Section 9 would have continued to haunt us. Once the plant was fully built and operational, at a cost in excess of two billion dollars, a private party might bring suit to enjoin the operation of the plant on the grounds that it would cause a violation of Section 9. We simply could not afford that risk.

This "double jeopardy" concern is not unfounded in light of the absolutist ruling of the U.S. Supreme Court in *TVA v. Hill*, 437 U.S. 153 (1978), the famous snail darter case. The Court there held that in considering whether to issue an injunction to enjoin a violation of Section 7, a balancing of costs and benefits is not permitted. The Court stated that Congress meant exactly what it said. The plain language of the Act prohibits federal action that would jeopardize the continued existence of an endangered species or result in the destruction of its critical habitat.

No subsequent case interpreting Section 7 or Section 9 has been decided by the Supreme Court. However, the language of Section 9 is framed in even more absolute terms than the language of Section 7. Accordingly, even if we obtain a favorable Section 7 consultation, we cannot be confident that, if a lawsuit were filed alleging a violation of Section 9, a court would balance the equities and refuse to enjoin the operation of a completed power plant.

THE ACT OFFERS NO REASONABLE ALTERNATIVE

There is no reasonable alternative course open to a utility faced with a Section 9 problem. The deepest fear is that a court might issue an injunction against the operation of a plant because an isolated or inadvertent "taking" had occurred in violation of Section 9. Even worse, an injunction might be issued, wrongly we believe, just because the utility couldn't prove that a Section 9 taking would not occur. With new large central station generating facilities costing billions of dollars, utilities simply are not able to assume such risks.

We have been told in discussions with NMFS that the government would not prosecute an alleged violation of Section 9 if an applicant had obtained a "no jeopardy" opinion under Section 7. We have also seen a memorandum prepared by the Associate Solicitor of the Department of the Interior which expresses the view that an implied exemption from Section 9 arises following the receipt of a "no jeopardy" opinion under Section 7.¹ While we commend these reasonable positions, reliance on a government interpretation or policy is not a reasonable alternative for a utility which is considering a multi-billion dollar investment. A third party could go to court, despite the government's position, to seek the relief that even the government

¹ See Memorandum dated December 30, 1981, from Associate Solicitor, Conservation and Wildlife, to Associate Director, Federal Assistance, Fish and Wildlife Service.

believes is inappropriate. Moreover, the government's position on these issues would not be binding on a court.

Another alternative would be to go through the exemption procedure added by the 1978 amendments to the Act. Following an unfavorable Section 7 consultation, an applicant can now apply for an exemption from the Endangered Species Committee. If the exemption is granted, any activity which is necessary to carry out the approved activity will also be exempt from the prohibition against taking in Section 9. (See Section 7(o) of the Act.) This provision helps to highlight one of the anomalies between Section 7 and Section 9 of the Act. Any activity for which a section 7 exemption is granted is also exempt from Section 9. Yet, in order to apply for the Section 7 exemption, an applicant must first obtain an unfavorable Section 7 consultation. On the other hand, in cases where a favorable Section 7 consultation is obtained, there is no immunity whatsoever to Section 9. Congress could not have intended this contradictory result.

Furthermore, the exemption procedure is extremely burdensome and involves extremely strict standards. The exemption procedure takes place at three different levels, culminating in a ruling by a specially appointed, Cabinet-level committee. Only two projects have gone through this procedure, and only one was granted an exemption. No applicant can anticipate success.

THE PROHIBITION CONTAINED IN SECTION 9 IS UNNECESSARY FOLLOWING FAVORABLE CONSULTATION

The prohibition in Section 9 is unnecessary in those situations in which a favorable Section 7 consultation has been obtained. The consultation process is sufficient to prevent the extinction of an endangered or threatened species or the destruction or adverse modification of its critical habitat. Section 9 only adds a heavier burden that may penalize an applicant which has complied in good faith with Section 7. An incidental and inadvertent taking will not threaten the survival of most endangered species. It may, however, needlessly penalize the owners of useful facilities and their customers.

Furthermore, under our proposal, where no Section 7 consultation has been obtained because there is no federal involvement in the activity in question, Section 9 would remain fully operative.

CONCLUSION

If the Secretary issues a "no jeopardy" opinion in connection with a proposed project, that project should be permitted to proceed without further risk under Section 9 of the Act. Similarly, if the Secretary suggests "reasonable and prudent alternatives" to the proposed course of action pursuant to Section 7(b) of the Act, and the applicant agrees to adopt one of those alternatives, the project should not be subject to further risk under Section 9 of the Act. We believe our proposed amendment meets those goals and would eliminate the inherent contradiction between Sections 7 and 9.

Accordingly, we propose that the present Section 7(o) [16 U.S.C. § 1536(o)] of the Act be deleted and that the following be substituted in its place:

"Notwithstanding Sections 4(d) [16 U.S.C. § 1533(d)] and 9(a) [16 U.S.C. § 1538(a)] of the Act or any regulations promulgated pursuant to such sections, (i) any action for which an opinion has been rendered pursuant to Section 7(b) [16 U.S.C. § 1536(b)] which concluded that such action is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of the critical habitat of such species, (ii) any action recommended by the Secretary pursuant to Section 7(b) [16 U.S.C. § 1536(b)] as a reasonable and prudent alternative or (iii) any action for which an exemption is granted under section 7(h) [16 U.S.C. § 1536(h)] of this Act, shall not be considered a taking of any endangered or threatened species with respect to any activity which is necessary to carry out such action."

It should be noted that our proposed amendment merely builds on the exemption from Section 9 which already exists in Section 7(o) of the Act. Thus, our approach would allow the contradiction between Section 7 and Section 9 to be eliminated without requiring any changes in other parts of the Act.

Thank you for allowing me to testify here today.

NORTHEAST UTILITIES: A SUMMARY OF SIGNIFICANT ENVIRONMENTAL PROGRAMS

Northeast Utilities and its subsidiary companies, The Connecticut Light and Power Company ("CL&P"), The Hartford Electric Light Company ("HELCO"), West-

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ern Massachusetts Electric Company ("WMECO"), and Holyoke Water Power Company ("Holyoke"), have long recognized the need for environmental awareness and responsibility.

Some examples of Northeast Utilities' accomplishments in environmental protection and in the propagation of fish and wildlife follow:

"Holyoke completed construction of the most successful upriver shad passage facility along the Atlantic seacoast in 1955 at Holyoke, Massachusetts. Holyoke had begun experimenting with methods to lift the American shad over the Holyoke Dam in the 1950s. After several experiments, a fish elevator was built that lifts the shad more than 50 feet, then releases them above the dam. Annual use of this facility has grown from 5,000 shad in 1955 to 347,000 shad in 1981. More than 300 Atlantic salmon were also lifted and captured at the Holyoke fishlift in 1981 by fisheries agencies. The salmon capture was especially significant as part of a federal program to restore historic salmon runs to the Connecticut River.

Holyoke was awarded the U.S. Department of Interior's Conservation Service Award in 1956 for the successful development of the Holyoke fishlift. This was the first time the Department of Interior's Conservation Service Award was given to a corporation.

Northeast Utilities recently developed a system that assists American shad to migrate downstream at the Boatlock Station hydroelectric plant in Holyoke. This experimental system, which is the first of its kind in the United States, herds and diverts the shad around the Holyoke Dam.

A three-fishladder complex was completed at Turners Falls Massachusetts, in 1980. Northeast Utilities, in cooperation with state and regional fisheries agencies, built the complex, which opens an additional 30 miles of river to American shad and Atlantic salmon. The fish ladders permit shad and salmon to swim upstream in increments of about one foot at a time.

Northeast Utilities has designed and developed the most sophisticated data acquisition network of any utility in the United States. Meteorological towers record data every few seconds, 24 hours per day, on wind speed and direction, light intensity and sulfur dioxide levels at every major Northeast Utilities plant site. Underwater monitors track water temperature and pH levels. This data is fed by telephone lines into a computer at Northeast Utilities headquarters in Berlin, Connecticut, where it is used to insure compliance with federal and state agency requirements. Northeast Utilities was the first utility in the country to have a completely automated data gathering system.

Long-term ecological monitoring has been underway at the Millstone Point nuclear power station on Long Island Sound since 1968. Independent research is carried out to study plankton, benthos, fish and terrestrial ecology. Northeast Utilities maintains a full-time staff of 28 scientists and technicians at the Millstone Point site to conduct these studies. Initiated by Northeast Utilities in 1968, these studies were incorporated as conditions of the plant's operating licenses and discharge permits in 1973.

A unique fish barrier was constructed at the outlet of a thousand-foot discharge quarry at Millstone Point to minimize thermal stress on fishes. Northeast Utilities voluntarily developed and erected this "venetian blind" type barrier, which has proved very effective.

Three special nesting platforms were constructed on the Millstone Point site over the past 10 years to protect and encourage the propagation of the American Osprey, which is a rare bird in the Northeast. Osprey were nesting on an old derrick at the former Millstone quarry site, and Northeast Utilities built the first platform as a substitute when the derrick was removed. The first nesting platform proved so popular, two more were built. Thirty-two of the 192 osprey known to have been born in Connecticut over the past 10 years were born in these nests.

When Connecticut shoreline residents grew concerned over a spreading problem with eelgrass, a locally abundant sea grass, Northeast Utilities voluntarily awarded a research contract to the University of Connecticut to determine the cause. The study concluded that the problem was the result of natural phenomena, not the operation of the Millstone Point plant.

A four-year research program to examine the potential benefits of waste heat in condenser cooling water initiated in 1976. An experimental research facility was established at the Millstone Point plant to explore the use of the heated discharge for aquaculture, i.e., the farming of shellfish. Scallops had been a traditional harvest in the area. In response to local and state interest, laboratory rearing techniques for scallops were developed and seeding experiments were conducted.

The winter flounder was also the subject of extensive Millstone Point studies. Northeast Utilities supported the development of a computer-based mathematical

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model designed to simulate the effect of the three Millstone units on the winter flounder. The model, completed under the direction of scientists at the University of Rhode Island, was one of the first to combine both hydrodynamic and life history factors in order to predict the changing effects on a species over the life of a power plant.

An elaborate bioassay program has been established at Millstone Point using approved EPA procedures to investigate the short- and long-term effects of effluents on Long Sound organisms. Northeast Utilities initiated this program because it believed the results would be scientifically useful in the future. In fact, studies to date have shown that there is no short- or long-term toxicity associated with the Millstone Point discharge. No outside agency required the program.

At the Connecticut Yankee atomic power station, Northeast Utilities undertook a milestone ecological study from 1965 to 1972 on the possible impacts of the power plant on the Connecticut River. The report focused on the impact of the thermal discharge on benthic organisms and resident and anadromous fishes. This study was the first in-depth exploration of the impact of a power plant a river. It was chosen by the American Fisheries Society to be the subject of its first published monograph.

Northeast Utilities owns and operates over 800 acres of recreational facilities at the Northfield Mountain Pumped Storage Project in Northfield, Massachusetts. Ten naturalists and rangers as well as seasonal assistance staff the facilities. Northfield provides approximately 25 miles of trails which can be used for cross country skiing, horseback riding or hiking. The cross country skiing program includes instruction, rental equipment, grooming and nordic ski patrol. Other activities include an interpretative river boat ride, camping at Bartons Cove or Mums Ferry and year round naturalist programs. This year, Northfield was host to the U.S. Olympic cross country ski team.

These studies and projects are only a portion of Northeast Utilities' accomplishments in the area of environmental protection.

Mr. BREAUX. Next we have Dr. James Tate.

Dr. Tate.

STATEMENT OF JAMES TATE

Mr. TATE. On behalf of the Western Regional Council, I would like to thank you for having us here. We think this issue is of great importance to the Intermountain West.

When I say I represent the Western Regional Council, I should tell you the Western Regional Council is a group of 50 chief executive officers, corporations from eight Western States, representing a number of different industries. We were organized in such a way as to try to present balanced policies that involve both economic development and environmental protection.

We would like to join you in making the Endangered Species Act more effective. We do support the basic concepts of the law. We are not here to urge you to weaken the law, but we do believe there are provisions that need to be changed.

We have been asked to appear on this panel regarding largely section 7 of the consultation process that ultimately leads to the exemption process. But there are some additional issues that I would just like to mention are of concern to us, as apparently they are of concern to you, based on your earlier comments.

We are concerned about the critical habitat concept. As it currently is designated, it always designates range. In the case of the Houston toad, for example, designation of range has been one of the major problems we have encountered.

We propose instead that we designate the ecology of the species within a certain area as being important. I will go into that later, if you want me to.

We are concerned about the needs for provisions in the act to encourage the application of experimental management techniques to

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endangered species. This is really an expansion of the rather simplistic proposal that Michael Bean gave us earlier, which deals only with introductions.

We believe that there is room for experimental management in endangered species, as well as nonendangered species.

We are concerned on the issue of western water rights. We believe we understand the problem. The problem we believe is overall allocation. It is probably a matter of taking of property. It is certainly a matter of state and compact water rights with Federal intervention into them. Our greatest concern here is the damage of the water rights issues that it would have on an endangered species coming under the Endangered Species Act.

Our main concern, however, is with the section 7 consultation process itself. It requires that all Federal agencies in carrying out their actions consult under section 7. It is a process by which the Federal agency may ask a Secretary to determine if an action will jeopardize the continued existence of a listed species or modify its critical habitat. We believe it is intended as a planning and negotiation tool so that irresolvable conflicts can be resolved.

Under section 7(a)(2) of the act the Western Regional Council proposes an amendment which deals with the adverse modification of critical habitat. We believe a significant portion of that habitat, a significant portion as decided by the Secretary, given the latitude to determine on a case-by-case basis, if that given action would destroy or adversely affect a portion of the habitat that is essential to the survival of the species.

We believe that the proposed modification to the amendments we have would also give more emphasis to considering mitigation and considering enhancement measures as alternatives to the current finding of jeopardy in every case.

The consultation process, as it is currently written, we believe is not clearly defined and it is not explicit. We believe we have a proposal for streamlining that process that will help us remove that uncertainty in the delay that we believe is inherent in it.

Consider a case where the consultation problem as it now exists presents problems to the applicant for a permit for two reasons.

One, the process as outlined we believe is unclear and overly structured. The steps required to carry out a consultation are not even clear to the agencies required to issue the license or the permit, much less the applicant for that license.

Second, the applicant doesn't know in advance how long it is going to take the process before the Secretary will be in a position to provide a jeopardy or nonjeopardy opinion. The structured nature of section 7 we believe means the Secretary has limited choices.

If there is not sufficient biological information available at the end of the 90-day decisionmaking period, then a Secretary may issue a jeopardy opinion, which is the conservative approach, or he can ask for an extension.

These extensions may be requested repeatedly. These applicants simply cannot preplan financing or construction schedules or in any way effectively consider the options of the proposed action under this uncertainty circumstance.

The process, as we propose it, has clear logical steps. There is a first level consultation in which the potential conflict is assessed and, if possible, eliminated. In the second level consultation, we incorporated the biological assessment, should it be necessary at all.

In the second level consultation a team is put together and that team is formed to consider a given problem. If need be, they can bring in a third party to do the biological assessment itself.

They conduct all of this under an agreement. In this way, the applicant knows when he enters, if he has to, the second level consultation what his commitment will be in time before he has to face a jeopardy or no jeopardy opinion.

Under these circumstances, financial operational preplanning can be effectively applied to the project. Rather than go into the exact details of the process, I would like you to turn, if you would, to the flow charts which compare the two processes, toward the back of the testimony.

The current section 7 process is initiated by the action agency. They request a list of species. Within 30 days the Secretary has to deliver the list of species. Then a biological assessment is done that automatically takes 180 days, no matter what the scope or nature of the project.

Then there is a period of time in which the Agency reviews the biological assessment. It has to conclude at that point whether it would not affect the listed species and the process is concluded or whether it would affect the species.

Then a request for formal consultation comes in, a biological opinion is formed, and jeopardy or no jeopardy is decided. If we cannot agree up to this point, we go on to the exemption process.

In the revised process, as proposed by the Western Regional Council, there is still an initiation by the action agency. The first level of consultation takes 60 days, and it could very well be the end of the necessary procedures. Reasonable and prudent alternatives could be considered at that level, if necessary, and the entire process is over. If the participants are not happy, a judicial review is still possible.

At the second level of consultation, a team is instituted that has a given time period in which to decide the nature, the size, the extent, the time period necessary to do the biological studies, if they are needed at all. At least this variable period is known in advance to the applicant.

After sitting down at the second level consultation, the applicant will know that he can or cannot proceed with finding financing, proceeding at current interest rates and so forth.

After this process is completed, as agreed upon by the team in advance when it will be completed, the Secretary then has an opportunity to issue a formal biological opinion.

The Secretary has a certain number of days in which to issue that opinion. Judicial review continues to be possible and, if necessary, application for exemption is still a part of this process.

We believe the revisions in this area would be a more efficient implementation of the act while still giving support to its underlying concepts. We believe that we have identified the issues that are most important to us in the Intermountain West.

We thank you for this opportunity to testify and for your consideration of our views.

Mr. BREAU. Thank you.

[The statement of Mr. Tate follows:]

PREPARED STATEMENT OF JAMES TATE, JR., PH. D., VICE CHAIRMAN, ENDANGERED SPECIES AD HOC COMMITTEE, WESTERN REGIONAL COUNCIL

Chairman Breaux and members of the subcommittee; on behalf of the Western Regional Council, I would like to thank the Committee for the opportunity to testify on an issue of great importance to the Intermountain West—the Endangered Species Act.

I am Dr. James Tate, Jr., Principal Environmental Coordinator for ARCO Coal Company and Vice Chairman of the Western Regional Council's Endangered Species ad hoc Committee. I have been a coordinator on environmental matters for Atlantic Richfield Company since 1973. Prior to that time, I was an associate professor at Cornell University and Assistant Director at Cornell's Laboratory of Ornithology. I have worked for the National Audubon Society and served in advisory roles to the Nature Conservancy and other conservation organizations.

The Western Regional Council was organized to provide a unified voice for the business community in the Intermountain West. It is composed of the chief executive officers of corporations in the states of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming. Major financial, utility, manufacturing, mining, and other industrial enterprises are represented on the Council. The Council works to establish balanced policies which consider the benefits of both economic development and environmental protection and provides a forum for the resolution of business problems on a regional basis.

I am here today on behalf of the WRC to discuss how the Endangered Species Act could be made more effective. The WRC supports the basic concepts underlying the Endangered Species Act and finds that it is a law which is basically sound and fulfills its intent. The WRC is not here today to urge you to weaken the basic concepts of the Act. However, the Intermountain West has had working, hands-on experience with how the Act functions and that experience has let us to the conclusion that there are provisions in the Act which should be changed. We would hope that if the areas which we identify are revised, the result would not simply be the conservation of species, but the bringing of listed species to population levels which would allow them to be removed from the list. That is, after all, the ultimate goal of the Act.

The WRC thinks that as a western regional organization of business entities it may be uniquely qualified to discuss the Endangered Species Act since the Act is, in many respects a "western issue". Of the 133 endangered or threatened animals currently listed as having historic ranges in the U.S.A., 71 species, or 53%, are found only west of the Mississippi River. Of the 60 plants listed, 80% are found west of the Mississippi. Overall 61% of the listed U.S. species are found in the West. These statistics, especially when considered in conjunction with the vast federal land ownership throughout the West and the concomitant federal actions invoking the ESA, clearly indicate that endangered species problems are of great concern to the Western states.

Although the WRC has been asked, in this hearing, to appear on a panel regarding Section 7 of the Act, the WRC would like to submit written testimony on two additional issues:—The "critical habitat concept"; and—The need for provisions in the Act to allow and encourage the application of experimental management techniques to endangered species.

THE CRITICAL HABITAT CONCEPT

The concept of identifying a critical habitat for a listed species is one which the WRC supports. However, the implementation of this concept has been unsatisfactory. The Department of Interior has consistently failed to designate critical habitats or has been incredibly slow to do so. Much of this inaction may be the result of a lack of personnel and funding to carry out this task. If the Act is to be effective Congress must provide sufficient funding to the administrative agencies responsible for implementation of the Act.

It is the WRC position that the implementation of the critical habitat provisions of the Act have failed to designate the "critical habitat" of endangered species in most of the cases where such a designation has been made. Critical habitat is defined as the physical, chemical, and biological factors which allow an organism to survive. However, the U.S. Fish and Wildlife Service has defined critical habitat as

suspected "ranges" (geographic areas in which the species might be most likely to occur).

The WRC proposes two amendments. The first proposed amendment would provide a narrower, most specific definition of "critical habitat." The second proposed amendment would add a new concept to the Act, the concept of "favorable habitat." This concept is essential to the WRC's proposed amendment regarding experimental populations.

Section 3(5)(A) is amended to read as follows:

"(A) The term 'critical habitat' for a threatened or endangered species means (i) the specific areas [within the geographic areas,] occupied by the species which contain the physical, chemical and biological elements necessary for survival and propagation of the species at the time of listing [at the time it is listed in accordance with the provisions of section 4 of this Act, on which are found those physical or biological features] (i) designated by the Secretary in accordance with the provisions of Section 4 of this Act, to be essential to the conservation of the species and (ii) which may require special management consideration or protection; and (ii) specific favorable habitat areas outside the [geographic area occupied by the species.] critical habitat which are designated at the time it is listed in accordance with the provisions of Section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species."

"(B) no change

"(C) Except in those circumstances determined by the Secretary as in (A)(ii) critical habitat shall not include the entire [geographical] favorable habitat areas which can be occupied by the threatened or endangered species."

Section 3 is amended by adding a new definition of term, as follows:

"The term 'favorable habitat' for a threatened or endangered species means:

"(i) an area which contains the physical, chemical and biological elements similar to the species' natural habitat at the time of listing where,

"(ii) no threatened or endangered species is known to exist at the time of listing, and

"(iii) where such conditions and elements may support an introduced species."

EXPERIMENTAL POPULATIONS

Individuals and populations of listed species are in many cases eminently suitable for manipulation and experimentation which may increase their populations and eventually allow their removal from the list. The Peregrine Falcon has proven to be just such a species. The success story of this species' response to artificial insemination, rearing, and release in the wild is widely known. It has been recently predicted by Dr. Tom Cade, of Cornell University, one of the founders of this methodology, that the Peregrine Falcon population will be sufficiently strong in the reasonably near future to allow it to be delisted.

This is a powerful statement in support of the concept that we should no longer view the best management technique for endangered species to be one of protection be setting aside refuges into which the actions of man will not penetrate. Instead, scientists have found many species to be remarkably pliable and subject to habitat and population manipulation techniques.

The Endangered Species Act does not currently allow sufficient flexibility so that concerned parties can participate in mitigation and management of impacts on endangered species. For example, should an endangered species be introduced at the site of a proposed development, the Section 7 consultation process is invoked. We wish to make the point that should a species or population be subject to innovative management or manipulation, as in the case of the Peregrine Falcon, the options of the agency or the applicant are limited or eliminated.

The WRC proposes the following amendment which should allow and encourage an applicant to apply innovative and experimental species management.

Section 10(a) is amended to read as follows:

"SEC. 10. (a) PERMITS.—(1) The Secretary may permit, under such terms and conditions as he may prescribe, any act otherwise prohibited by section 9 of this Act for scientific purposes to enhance the propagation or survival of the affected species.

"(2) The Secretary may, in addition, permit the introduction and establishment of, and experimentation with, experimental populations of endangered or threatened species, or species on which the formal listing process has commenced.

"Such experimental populations shall be managed under Memorandum of Agreement between the Secretary and the applicant. Section 7 and 9 shall not apply to any experimental population or habitat where species have been introduced."

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SECTION 7 CONSULTATION

Section 7 of the Endangered Species Act requires that threatened or endangered species concerns be addressed by all Federal agencies in carrying out all agency actions. Consultation, under Section 7, is the process by which a federal agency and the U.S. Fish and Wildlife Service determine if an agency action will jeopardize the continued existence of a listed species or adversely modify critical habitat. The consultation process is intended as a planning and negotiation tool to avoid irresolvable conflicts between threatened and endangered species and agency actions.

The first WRC amendments to Section 7 which the WRC would like to discuss are to Section 7(a)(2). A concept in the Act which has caused problems for WRC companies is "adverse modification of critical habitat." The WRC proposes that the Act be changed to read adverse modification of a "significant portion" of habitat. The term "significant portion" cannot be defined biologically. The addition of the term "significant portion" is to give the Secretary of Interior the latitude in which to determine, on a case-by-case basis, if a given action will destroy or adversely modify a portion of habitat essential to the survival of a species. This revision, plus the WRC amendments to the concept of critical habitat discussed earlier in the testimony, should go a long way toward relieving some of the cost and time burdens on companies while still providing protection to species. Section 7(a)(2) would also be revised to give more emphasis and consideration to mitigation and enhancement measures as alternatives to the finding of jeopardy.

The consultation process, as it is now written, is not clearly defined and is certainly not explicit. This lack of definition can cause project delay, more importantly, it causes uncertainty. A company, waiting for a permit or license from a federal agency, is always uncertain as to how long the "Consultation Process" will take, what the delays and final decision will cost the company in money and time, and when, if ever, the company will complete its responsibilities under the Endangered Species Act. The present consultation process is written in such a way that it can easily be used by federal agencies to intimidate companies into accepting unreasonable delays (and their resulting costs) by threatening jeopardy opinions.

The WRC would like to propose amendments to Section 7 which would revise the process and would help remove the present uncertainty and delay now inherent in it. This revised process should ameliorate many of industry's problems while still providing effective species protection.

The WRC proposed consultation process would provide a clearcut, two step process with clearly defined deadlines and responsibilities. This revised process would encourage inter-agency coordination and would make the applicant a more equal participant in the process. Instead of the applicant, various federal and state agencies, and the Fish and Wildlife Service all working on the consultation separately, the WRC process would bring these players together. For instance, instead of each federal agency and the applicant retaining separate consultants to carry out research on the species and its habitat, the WRC would provide for one consultant agreed to by all parties. The specific amendments to Section 7 being proposed by the WRC are described below:

Section 7 is amended to read as follows:

"SEC. 7. (a) FEDERAL AGENCY ACTIONS AND CONSULTATIONS.—(1) The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species listed pursuant to Section 4 of this Act.

"(2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of a *significant portion of the habitat* of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this Section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available, *and shall consider as an alternative to the finding of "jeopardy" the possibility of mitigation and enhancement measures, including, but not limited to, research, habitat acquisition and maintenance, propagation, or transplantation, to reasonably minimize the adverse effects of the agency action upon the species or critical habitat concerned.*

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"(3) Each Federal agency shall confer with the Secretary on any agency action which is likely to jeopardize the continued existence of any species [proposed to be listed] as to which the formal listing process under Section 4 has been initiated or which is likely to result in the destruction or adverse modification of a significant portion of the habitat proposed to be designated for such species. This paragraph does not require a limitation on the commitment of resources as described in subsection (d). In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available, and shall consider as an alternative to the finding of "jeopardy" the possibility of mitigation and enhancement measures, including but not limited to, research, habitat acquisition and maintenance, propagation, or transplantation, to reasonably minimize the adverse effects of the agency action upon the species or critical habitat concerned.

["(b) Secretary's Opinion. Consultation under subsection (a)(2) with respect to any agency action shall be concluded within 90 days after the date on which initiated or within such other period of time as is mutually agreeable to the Federal agency and the Secretary. Promptly after the conclusion of consultation, the Secretary shall provide to the Federal agency concerned a written statement setting forth the Secretary's opinion, and a summary of the information on which the opinion is based, detailing how the agency action affects the species or its critical habitat. The Secretary shall suggest those reasonable and prudent alternatives which he believes would not violate subsection (a)(2) and can be taken by the Federal agency or the permit or license applicant in implementing the agency action."]

"(b) SECRETARY'S OPINION.—(1) FIRST-LEVEL CONSULTATION. To facilitate compliance with the requirements of subsection (a)(2), each Federal agency shall, with respect to any agency action for which no contract for construction has been entered into and for which no construction has begun on the date of enactment of the Endangered Species Act Amendments of 1982, within 10 days request of the Secretary information as to whether any species listed or formally proposed to be listed may be present in the area of such proposed action. The Secretary shall provide a written opinion to the agency within 60 days of the receipt of such request detailing: (1) whether or not such species is likely to be present; (ii) if the agency action is likely to jeopardize the continued existence of the species or result in the destruction or adverse modification of a significant portion of the species' habitat; and (iii) where appropriate the Secretary may suggest those reasonable and prudent alternatives which he believes would not violate subsection (a)(2) and could be taken by the Federal agency or the permit or license applicant in implementing the agency action. In fulfilling the requirements of this paragraph, the Secretary shall rely on the best scientific and commercial data available. A negative finding as to subparagraphs (i) or (ii), or agreement between the agency, the permit or license applicant and the Secretary upon the implementation of the alternatives suggested pursuant to subparagraph (iii) shall conclude the agency's duty as to the consultation provisions of Section 7.

"(2) SECOND-LEVEL CONSULTATION. If the Secretary determines, in the first-level consultation pursuant to subsection (b)(1) that the agency action is likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of a significant portion of such species' habitat, and if the Secretary, the agency and the permit or license applicant are unable to agree on prudent alternatives pursuant to subsection (b)(1)(iii), the second-level consultation process shall be immediately commenced by the agency.

"(i) The agency shall promptly notify the Secretary and the permit or license applicant of the commencement of the second-level consultation process, and shall within 60 days, or within such longer period as requested by the permit or license applicant, arrange for a meeting of the Consultation Coordination Committee. The Consultation Coordination Committee shall consist of one representative from the agency, one representative selected by the Secretary, and one representative from the permit or license applicant.

"(ii) The Consultation Coordination Committee shall, by unanimous consent, select an environmental consulting firm, agency, or individual, a representative of which shall serve as the fourth member of the Committee. The environmental consulting firm, agency or individual shall perform the necessary biological assessments required under the Second-Level Consultation, as determined by the Memorandum of Understanding. The consultant shall be responsible to the Committee, and shall be paid jointly by the agency, the Secretary, and the permit or license applicant.

"(iii) The Consultation Coordination Committee shall, within 30 days, arrive at a written Memorandum of Understanding, to be signed by all members of the Committee. The Memorandum of Understanding shall guide the entire Second-Level Consultation. It shall outline in reasonable detail, any biological assessment required, the length of time to be covered by the Second-Level Consultation, the responsibilities of

Committee members, the specified meeting dates of the Committee, the procedures which shall be followed in designating mitigation measures, if any, and the goals sought to be achieved. The entire Second-Level Consultation, once the Memorandum of Understanding has been entered into, shall not exceed the time period agreed to in the Memorandum of Understanding.

(iv) Upon completion of the consultation as agreed upon in the MOU, the CCC may reach one of the following conclusions: (i) the action is not likely to jeopardize the continued existence of the species, or (ii) the action is likely to jeopardize the continued existence of the species. If the second conclusion is reached, the Committee may recommend the project proceed with mitigation measures as determined by the Committee, based on the work performed in the MOU.

(v) The Secretary shall issue a formal biological opinion within 60 days of the conclusion of the Second-Level Consultation. If the Secretary's opinion is contrary to that of the CCC, the burden of the proof shall rest upon the Secretary as to his opinion. Similarly, if the Agency denies any permit in contradiction of the CCC recommendation, the burden of proof shall rest on the Agency to justify such denial.

(vi) The Second-Level Consultation shall constitute the complete consultation required under Section 7, and shall conclude the Secretary's and the agency's duties as to the consultation provisions of Section 7.

(viii) The applicant or the agency may, at its option, proceed to the exemption process or to judicial review upon receipt of a jeopardy opinion at the end of either the First-Level Consultation or of the Second-Level Consultation. The applicant may at any time cancel its intended project and shall incur no further liability under the MOU.

For purposes of clarity, included in Appendix One, is a side-by-side comparison of the present Section 7 process with that proposed by the WRC and a diagram of both the processes.

CONCLUSION

The Western Regional Council has identified three areas in the Endangered Species Act which we believe need revision and have presented amendment language which will hopefully rectify these problems. Revisions in these areas would in the opinion of the WRC result in a more efficient implementation of the Act while still giving support to its underlying concepts.

Thank you for this opportunity to testify and for your consideration of the Western Regional Council's views.

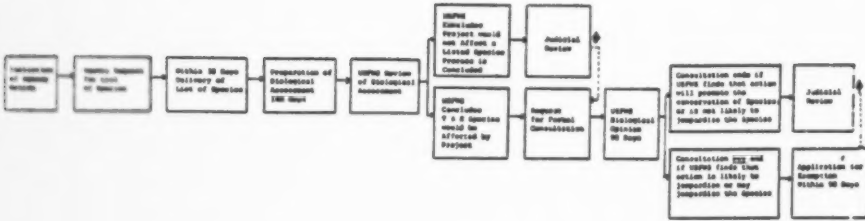
APPENDIX ONE: COMPARISON OF THE PRESENT SECTION 7 PROCESS WITH THE PROCESS
PROPOSED BY THE WESTERN REGIONAL COUNCIL

SECTION 7 PROCESS COMPARISON

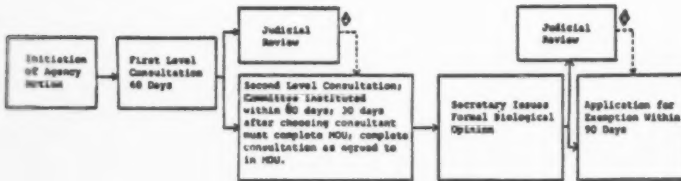
THE CURRENT SECTION 7 PROCESS	THE SECTION 7 PROCESS AS REVISED BY THE WRC
1. Initiation of Agency Action: The process begins when a Federal agency initiates some action. This may be a decision to build a dam, for example, or it may be the consideration of a permit or license application from a non-federal applicant.	1. (Same)
2. Agency request for List of Species: Once the agency has a proposed action, it must write to the Area Manager of the USFWS, generally describe the project (its location, etc.), and request a list of threatened and endangered species which may potentially occur within the project area.	2. First Level Consultation: Once the agency has a proposed action, it must write to the Area Manager of the USFWS, generally describing the project and requesting a first level consultation. Within 60 days the Secretary of Interior gives a written opinion: i) whether or not species are likely to be present ii) if species are likely to be present, whether action is likely to jeopardize iii) if appropriate, Secretary may suggest mitigation measures A negative finding under (i) or (ii) or agreement under (iii) concludes the consultation process of Section 7.
3. USFWS delivery of List of Species: Within 30 days (USFWS policy) of receipt of the request in Step 1, the USFWS must respond to the agency with a list of species. The list may include plant and animal species under three headings: listed, proposed, candidate. Listed species are already formally designated as threatened or endangered species and have formal protection. Proposed species have been formally recommended for the list, but are not yet officially designated. These species are not afforded official protection, but have a high probability of receiving such within about six months.	3. Second Level Consultation: A positive finding under (i) or (ii) allows the applicant to proceed to the second level of consultation. Second level consultation is initiated by written request to the appropriate USFWS Area Manager.
4. Preparation of Biological Assessment: The list of species conveyed to the agency those species which are potentially of concern to the USFWS. Within 180 days, the agency must prepare a Biological Assessment, a document which discusses the actual occurrence of the species in the project area and analyzes the potential effects of the project on the species. The Biological Assessment requires field investigations of species occurrences. The assessment is an agency document, but can be prepared by an applicant or contractor for agency approval and distribution. The biological assessment is required of all projects which significantly affect the quality of the human environment. It must be completed before construction of the project has begun or before a contract for construction has begun. A biological assessment is a process as well as a report. The federal agency or non-federal designee shall at a minimum: (A) Conduct on-site inspection of the project area for listed species. (B) Interview recognized experts on the species. (C) Review literature and scientific data. (D) Review and analyze effects of the proposal on listed and proposed species, including cumulative effects. (E) Analyze alternative actions. The Biological Assessment is required only to address listed species, but usually will address proposed species and candidate species in order to identify potential future concerns. The Biological Assessment is required to reach a conclusion as to whether or not the proposed action will, in any way, affect a formally listed species.	i) Establish a consultation committee (CCC) composed of a representative of the agency, a representative appointed by the Secretary, and a representative of the applicant. ii) Committee must meet within 60 days of the initiation of second level consultation. iii) The Committee will by majority vote, select a consultant to serve as a non-voting member. The consultant will perform the biological assessment as determined by a memorandum of understanding. iv) The Committee has 30 days after choosing consultant to complete a MOU to guide the second level consultation. v) Upon completion of the consultation, as agreed to in the MOU, the CCC may conclude that the action is: a. not likely to jeopardize the continued existence of a species or b. is likely to jeopardize the continued existence of a species. vi) The second level consultation constitutes the complete consultation required under Section 7.
5. USFWS Review of Biological Assessment: Following receipt of the Biological Assessment, the USFWS will review the document to determine if the Service agrees with the agency conclusion on "may affect". If the conclusion is that the project would not affect a listed species, and USFWS agrees, the process is concluded. If the conclusion of the Biological Assessment is that T&E species would be affected, or if the USFWS reaches that conclusion, contrary to the results of the Biological Assessment, then the process continues with Step 6.	
6. Request for Formal Consultation: If the conclusion of the Biological Assessment is that a T&E species will be affected, either the agency or USFWS can initiate formal consultation; usually, the agency would do so. Formal consultation is initiated by written request to the appropriate Area Manager of the USFWS.	

7. USFWS Biological Opinions.	After receipt of a formal request for consultation, the USFWS has 90 days to issue its Biological Opinion as to whether the projected effects of the project on YAE species will (1) adversely modify critical habitat, or (2) jeopardize the continued existence of the species. The 90 day deadline may be extended by mutual agreement with the agency. In its Biological Opinion, the USFWS may reach the following conclusions, based on USFWS policy: (1) the action will <u>promote</u> the conservation of the species; (2) the action <u>is not likely to jeopardize</u> the continued existence of the species; (3) the action <u>is likely to jeopardize</u>, or (4) the action <u>may jeopardize</u> the continued existence of the species. If either of the first two conclusions is reached, the agency's and applicant's responsibilities have been met. If either of the latter two conclusions is reached, the federal agency may not proceed with its action without (1) modifying the design of the action to prevent jeopardy, or (2) obtaining an exemption which allows the action to proceed even though it will or may jeopardize the continued existence of the species. If USFWS issues either conclusions 3 or 4, it is required to suggest "reasonable alternatives" to the proposed action which would prevent the jeopardy ruling. Also, USFWS may issue conclusion 4 if there is insufficient information to definitively conclude 1, 2 or 3 and the federal agency has denied a written request for a time extension to gather the additional information. Issuance of conclusion 4, "may jeopardize", allows the federal agency to proceed, if it desires, with an exemption application.	
8. Termination of Consultation.	Consultation ends (1) when opinions 1 or 2 (step 7) are issued, (2) when the federal agency denies a permit or license application because of a jeopardy ruling, or (3) when the federal agency notifies the USFWS, in writing of its intent to forego its proposed action, modify the action, proceed with the action, or apply for an exemption.	4. The Secretary shall issue a formal biological opinion within 60 days of completion of the second level consultation. If the opinion is contrary to that of the CCC, the burden of proof lies with the Secretary. If the Agency denies a permit or license on contradiction of the CCC recommendation, the burden of proof lies with the Agency.

THE CURRENT SECTION 7 PROCESS



SECTION 7 PROCESS AS REVISED BY THE WESTERN REGIONAL COUNCIL



Mr. BREAU. Our final witness on this panel will be Mr. Parenteau.

STATEMENT OF PATRICK A. PARENTEAU

Mr. PARENTEAU. Thank you, it is indeed a pleasure to be with you today to talk about something very near and dear to my heart, the endangered species program of the Federal Government.

This Nation prides itself on having a keen sensitivity to environmental quality and to the concept of stewardship. I think everybody in this room would probably agree with the notion that we do not so much inherit the environment from our forebearers as we borrow it for a time from our descendents.

Nowhere is this concept more evident and important than in the goal of protecting endangered species. Extinction is the ultimate environmental insult.

That is why Congress and this committee have pledged themselves to avoid the conscious extirpation of species wherever possible. That is a noble objective.

I am struck by the irony of all of the attention this statute is getting in these hearings and the hearings in the Senate, the number of people here. When I look at the funding level for this program, for 1983, the entire endangered species program budget is something like \$16.5 million. That wouldn't buy much exploration time in the Arctic.

That wouldn't pay for a month's worth of earthmoving on the Tennessee Tom Bigbee Waterway. Yet that is the total amount of money this administration is seeking to carry out the noble purpose of saving endangered species.

I was very pleased to hear the chairman say that the full committee will recommend an increase in the funding levels for 1983. We appreciate very much that funding will be restored for the section 6 program, the Federal-State cooperative agreements program which is a keystone to the recovery effort.

However, unless adequate levels of funding are restored for the listing, the recovery and the consultation process, many of the problems that you are hearing today from the witnesses will continue and, indeed, will get worse.

No one can disagree with the fact that a program must be adequately funded if we are to have good scientific data to list species, if we are to have decent recovery plans so that species can be removed from the list and no longer constitute the problems that some people say they do, for consultations to be completed expeditiously on the basis of sound information with the identification of reasonable and prudent alternatives such as the law intended.

Money isn't the answer to all of the problems you are hearing, but money is a major problem in the effective functioning of the endangered species program.

To turn for a moment to some of the substantive provisions of the statute, and not to belabor points that have been made by other witnesses, it is clear that section 7 is the centerpiece of these hearings as it indeed has been for the last two rounds of amendments of the act.

I won't repeat what others have said with regard to the proper functioning of the section 7 process except to say that I heartily agree with those who have looked at the evidence as we have, very closely, very carefully, opinion by opinion, consultation by consultation, and found that, indeed, there is no case, whatsoever, to submit that the act is not working, that it is stopping projects, that it is causing unnecessary delays, or that it is tying up needed development.

It just isn't happening. The fact that no one can come forward with specific examples of where it's happened is proof positive of that fact.

That doesn't mean that there are not still problems to be addressed in fine-tuning some of the provisions of this statute. But it does mean that the basic framework, the basic provisions in section 7, should not be tampered with to any significant degree except to strengthen it.

There are three points I would like to make with regard to section 7. One has to do with the problem of what do you do when you don't know. It is a problem that is on the increase, particularly in areas where we are dealing with exploration followed by development of energy resources or mineral resources, nonenergy minerals.

There are several instances where the 90-day period prescribed by the statute simply isn't enough time to get the information to make a biological determination as regards jeopardy.

What happens when that situation occurs? There are three choices. One is to go ahead with the project or the exploration, with all of the concomitant commitments that entails—money, materials, so forth.

Another is to stop everything until the information is obtained. Both of those seem to be the extreme positions.

The middle ground, the one that seems to make the most sense to us, is that in a situation where 90 days is not enough time to obtain the information, consultation should continue and the precautions of section 7(d) on the irreversible commitment of resources should come into play.

That means that things which will not, as a practical matter, foreclose alternatives could go forward. But those things which did constitute such a commitment would not be allowed pending completion of studies necessary to render a biological opinion.

Unfortunately, this is not happening. Instead what we find are biological opinions which simply shrug and tell agencies and project applicants to go forward with whatever it is they want to do and hope that the biologists can somehow catch up with the project at a point before it is too late.

That is an unsuitable situation in the implementation of section 7. We have proposed an amendment to deal with it.

A second major problem that has not yet been touched on, I don't believe, has to do with the scope of the impacts considered in the consultation process.

The solicitor of the Department of Interior has revised an earlier solicitor's opinion with regard to the subject of cumulative impacts. The revision has significantly narrowed the scope of impacts to be considered in the consultation process.

The new opinion says that if another consultation process will be available for a project, it will not be considered in conjunction with the project that is being proposed and that is under consultation at the moment.

What that means is that not only will common impacts on common resources not be considered, but perhaps more importantly, that the range of alternatives will be reduced.

For example, if there are five or six water diversions from a system and the biologists can say there is a minimum stream flow needed for an endangered fish you have a much greater range of options if you have five projects to modify, than if you can only work with one at a time.

Each one that goes in then becomes a *fait accompli*, it cannot be disturbed. So the narrow scope of a solicitor's opinion on cumulative impact is a harmful thing, not only for the species, but for the applicants for Federal permits or approvals who may be refused because earlier projects have taken all the available water.

The final thing I would like to say, has to do with western water law. Indeed, western water is a scarce commodity. Those who want to appropriate for a variety of reasons are legitimately concerned about interference with their ability to divert and make beneficial use of the water.

But for this very same reason, we are concerned about the survival of species dependent on those scarce streamflows.

It is not an either/or situation, in the cases that we have examined. Indeed, all of consultations on western water projects to date, have culminated in biological opinions that have allowed those projects to go forward.

There are still some in negotiations and one in litigation at the moment. But so far, none of them have been stopped or significantly delayed as a result of section 7. Very little interference with water flows has been the result of the consultations.

The western half of the country simply cannot be exempt from the Endangered Species Act.

I would like now to turn to the exemption process and offer a suggestion for how that process might be streamlined and improved. Before I do that, I wish to emphasize that so far as the record is concerned, there has been no problems with the exemption process, largely because it has not been used except in the two instances already mentioned.

We definitely feel, on the basis of the opinions and consultations that we have studied, that the reasons the exemption process have not been resorted to is because there have not been unresolvable conflicts.

However, recognizing that industry groups and other development interests are anxious about how long that process might take should they have to resort to it, we are trying to be responsive to their concerns.

To hear some people talk, what they want is the kind of process where they can find out quickly where do I go to get my exemption. That is not exactly what we have in mind with the exemption process.

There is more to it than that. It is a balancing process. It calls for some very difficult public policy questions to be resolved.

The present process, by our count, and it does vary from witness to witness, I guess, takes about 450 days. We are proposing to cut that in half and to do it in the following manner: From the completion of consultation, the applicant would have 90 days to file an application for exemption with the Secretary of the Interior.

The Secretary would then have 15 days to certify that application. The process of certification would be fairly simple and mechanical and would look at whether, in fact, good-faith consultation has occurred, biological assessment has been done, and generally speaking, the consultation process is in order and a true conflict exists to be resolved by the full committee.

Within this 15-day period, if the Secretary certifies that an exemption application should go forward, an administrative law judge would then be picked from the pool of Federal administrative law judges.

This would substitute for the existing review board mechanism which we think is too cumbersome and too politically oriented to function effectively and quickly.

The administrative law judge would engage in a detailed fact-gathering process which would lead to a report to be forwarded to the full exemption committee.

The administrative law judge would have 150 days to complete this factfinding process and the report. In the course of that time, he would make four determinations with respect to the availability of reasonable and prudent alternatives, the national or regional significance of the proposed project, any mitigation requirements or measures that could be taken to reduce the impacts on the species and whether or not there has been any irreversible or irretrievable commitment of resources during the consultation period.

Once this report had been submitted to the committee, it would then have 60 days to decide whether or not to grant an exemption.

The total time elapsed, 225 days. The rest of the provisions of existing sections 7(g) and 7(h) would remain unaffected, with two major qualifications.

One, our proposal clarifies the present ambiguity regarding the authority of the initial level of review, in our version, the administrative law judge and in the existing version, the so-called endangered species review board, that that ALJ does not look behind the biological opinion, does not engage in a factfinding exercise to determine whether jeopardy will, in fact, occur.

Rather jeopardy and the correctness of the biological opinion are given in this process.

The second thing we would wish to clarify is when the application reaches the committee level, it be made clear in the statute that the committee shall disregard sunk costs in projects. Failure to do that would be to give proposed actions that have some costs associated with them an unfair advantage in the comparison of reasonable and prudent alternatives.

We offer this amendment in the spirit of cooperation with those who believe that the exemption process is not as ready a forum for resolution of irresolvable conflicts as it should be, but we also caution this committee to treat carefully any statutory amendments.

You can create more problems sometimes amending a statute than you fix. You can certainly invite a good deal of litigation. For

that reason, we say go forward with consideration of his proposal and others, but do so cautiously.

To conclude, we believe very strongly that the basic framework of this statute is sound, that the elements of section 4, section 6, section 7, section 9, are absolutely essential to any legitimate, useful, endangered species conservation program.

We think section 7, in particular, must be retained with all of its vitality and improved in the ways I suggested.

Finally, in our experience, in every conflict between projects and endangered species, no matter how difficult that conflict might seem, no matter how irresolvable it may seem at first, there is always an alternative to the proposal, to the project, whether it be a simple modification or some other way of achieving the objectives of the project proponents.

There is always an alternative if one is willing to take the time to look for it and, yes, incur some added expenses in order to go a different way.

But there is no alternative to the endangered species.

Thank you, Mr. Chairman.

[The statement of Mr. Parenteau follows:]

PREPARED STATEMENT OF PATRICK A. PARENTEAU, VICE PRESIDENT FOR
CONSERVATION, NATIONAL WILDLIFE FEDERATION

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On behalf of the National Wildlife Federation ("NWF"), we appreciate this opportunity to submit this statement on the Endangered Species Act of 1973, as amended ("ESA").

NWF is this nation's largest, not-for-profit, citizen conservation-education organization with over 4.5 million members and supporters in all fifty states, Guam, Puerto Rico, and the Virgin Islands. NWF has a strong and continuing interest in the protection of endangered species.

NWF has consistently expressed support for the protection of endangered species through resolutions adopted at our Annual Meetings (Appendix 1). NWF's 1956 National Wildlife Week theme was "Save Endangered Species." We have been involved in numerous legal efforts to see that endangered species are protected. For years we have disseminated information on endangered species. Since 1970, NWF has distributed over 650,000 pieces of literature on endangered species. This year our National Wildlife Week Theme, "We Care About Eagles", again focuses on an endangered species. As part of this campaign, over 480,000 education kits and 325,000 posters will be distributed to call attention to the plight of eagles.

Public support for endangered species is strong. A July 1981 poll showed that 91% of the members of the NWF believe that endangered species listings should be continued whenever biological evidence warrants it, and 75% believe that endangered species must be protected even when it blocks commercial activity. These results mirror those of a poll conducted by the President's Council on Environmental Quality in 1980, which found that 73% of the U.S. public believes that endangered species must be protected even at the expense of commercial activity.

The long and painstaking development of the ESA clearly demonstrates a Congressional commitment to the conservation of endangered species and their habitat that parallels this public support (Appendix 2). This commitment should not be overlooked as we consider reauthorization of the ESA.

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We have had nine years of experience with the current ESA. As our testimony demonstrates, the Act has worked well. It has been the subject of close scrutiny, discussion, and major changes as recently as 1978 and 1979. The ESA of 1973 has evolved to permit greater flexibility and predictability with regard to economic development. In 1978 Congress amended the 1973 Act to establish a process whereby federal agency actions that would jeopardize the continued existence of a threatened or endangered species may be exempted from the requirements of Section 7. We have had sufficient time since the 1978 amendments to see that major revisions to Section 7 are not necessary. At oversight hearings on the ESA before the Senate Environmental Pollution Subcommittee, Senator John Chafee told proponents of major revisions that "time is the best indicator of the success of an act. We don't feel any need to change the ESA, so the weight of the proof is on you." We agree.

The Administration has chosen not to propose major changes in the ESA. We support statements by Secretary of Interior James Watt that with the exception of streamlining the exemption process and addressing state concerns, " [the Administration does] not now take a position recommending further legislative change..." Unfortunately, budgetary and administrative actions by the Administration are not consistent with these statements and are contrary to a vigorous and effective program for endangered species.

Under the Reagan Administration, the endangered species program in the U.S. Fish and Wildlife Service (FWS) has borne a disproportionate level of cuts that is disrupting both federal and state endangered species efforts.

In the FY 82 Reagan budget, listing funds were cut 43 percent below the level recommended by the Carter Administration. As a result, only one species, the Heliotrope milk vetch, has been proposed for listing in the last 13

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months. Although the Administration's FY 83 recommendations for listing have increased, they are still far below that required.

Grants to states under Section 6 of the ESA were eliminated in the FY 82 Reagan budget. The \$4 million that would have gone to state endangered species programs in 39 states was cut from the budget. Although a small amount of carryover funds have maintained a skeleton program in some states, the Administration's plan to zero Section 6 funds again in FY 83 will ensure the termination of this successful program.

The FY 83 budget also proposes to cut nearly \$1 million in endangered species law enforcement. This will result in a force reduction equivalent to 13 agents. Even the highly successful (and inexpensive) peregrine falcon recovery effort has been targeted for elimination.

Although a backlog of land acquisition projects to protect endangered species habitat is awaiting funding, the FWS FY 83 budget proposes to limit use of Land and Water Conservation Funds to only \$1.6 million. In comparison, approximately \$60 million has been recommended for park acquisition by the National Park Service.

Cuts in other parts of the FWS will also affect endangered species efforts. For instance, the successful Cooperative Wildlife and Fishery Research Unit Program is once again proposed for elimination. These Units do a significant amount of research on endangered species; last year 21 Wildlife Units attracted \$750,000 from various sources for work on endangered and nongame species.

Habitat protection and endangered species programs of the National Marine Fisheries Service (NMFS) also have been identified for disproportionately large cuts totalling \$4.4 million. These cuts will mean significant reductions in work on marine mammals, other endangered species, and permit and license review functions that protect vital coastal wetlands.

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Finally, Secretary of Interior, James Watt has recommended that the ESA be reauthorized for only one year. The one year reauthorization would allow the Administration "to pursue correction of identified problems through existing regulatory and administrative mechanisms..." It also would allow "the time necessary to prepare recommendations for major changes necessary to improve the Act." We are greatly concerned by these statements for two reasons. First, many of the regulatory and administrative actions already taken by this Administration with regard to the budget process, listing, redefinition of "harm," consideration of cumulative impacts, and application of the ESA to federal actions in foreign countries have weakened the Act. Second, the Administration's request that the ESA be reauthorized for one year on the premise that time is needed to identify areas of the ESA requiring major changes is unacceptable. For the past six months the Department of Interior (DOI) has reviewed the Act in detail to identify areas in which it might be strengthened. The process has included a review of public comments, three sets of issue papers, and several meetings among Administration officials. Further review would serve only to keep the endangered species program in a state of flux and preclude effective operation for another year. Moreover, ESA has been closely scrutinized for nine years. Surely, all revisions that would "improve" the Act are well understood by all including Interior. Our section by section analysis of the ESA, which follows, effectively demonstrates that major changes are not necessary. Efficient and successful operation of an endangered species program in this country requires the stability offered by a multi-year reauthorization. We, therefore, strongly recommend that the ESA be reauthorized for a period of five years.

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II. SECTION 4

The Section 4 listing process is the initial critical link in the endangered species program. It is through this process that species threatened with extinction are identified and listed. Once listed, they are brought under the protective umbrella of ESA, and are protected from illegal taking and from federal actions that would jeopardize their continued existence. The listing process and the manner in which species are selected for listing is complex and time consuming. But the process can work with adequate funding and agency support. Unfortunately, both of these ingredients are now missing.

A. Vertebrates, Invertebrates, and Plants Should Be Protected Equally.

Proposals to restrict the listing and protection of species to "higher life forms" threaten the integrity of the ESA. As used, the phrase "higher life forms" would exclude invertebrates, non-vascular plants, and on occasion, even some vascular plants. DOI has already established a dangerous precedent in this regard by establishing a listing priority system that, all other factors being equal, lists "higher life forms" before "lower life forms."

These listing priorities or restrictions are biologically and economically indefensible. The health of our ecosystem is dependent on maintenance of the complex ecological relationships that exist among all species. The term "lower life form" implies that nearly three fourths of the world's species are unimportant, but species importance and high taxonomic status are not synonymous. To the contrary, plants and invertebrates often may be more important to ecosystem health than vertebrates. For example, the loss of the peregrine falcon in the eastern U.S. had comparatively little effect on other species, whereas the loss of the American

chestnut tree over about the same area and time period adversely affected virtually all eastern forest wildlife. "Lower life forms" also include endangered species of wheat, corn, and rice that future plant breeders may need to produce new crops. At the recent Conference on Biological Diversity, Dr. William L. Brown, Chairman of Pioneer Hi-Bred International, spoke of the need to maintain existing genetic material of foodstocks and pointed out that "about 15 species of cultivated plants literally stand between man and starvation."

Additionally, scientists have found recently that some snails, mollusks, and plants may be useful to man in the fight against cancer. A recent example of the pharmaceutical potential of plants was cited in the Washington Post (February 11, 1982) in which a team of research scientists discovered a compound successful in treating leukemia cells in mice. The chemical is derived from the castor bean, a subtropical plant found in the southern U.S. In a recent paper at the Annual Meeting of the American Association for the Advancement of Science, Dr. Norman Farnsworth predicted that "[i]f a reasonably organized effort were placed on the search for new drugs from plants of the America flora during the next 19 years, it would not seem unreasonable to anticipate an average of one new drug each year being developed from the predicted 2,200 species to be extinct by the year 2000 A.D."

Because few species of plants and invertebrates have been subject to sufficient investigation to determine possible medical, agricultural, or industrial benefits, extinction of any species may deprive mankind of many valuable products.

B. All Species That Are Endangered or Threatened Must Be Listed.

Each year, the Office of Endangered Species (OES) of the FWS prepares a "Program Advice Species List" (PASL), which is a compilation of species that are critically endangered, and for

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which the majority of the field work and data analysis have been completed. Species on the PASL are prime candidates for listing.

Since 1973, the number of species on the PASL has averaged 400 per year. However, only 288 threatened and endangered species are listed for the U.S., many fewer than the yearly average on the PASL. During the past 8 years, only 165 candidate species have been listed; an average of 21 per year.

In light of the above, the listing of species must be expedited to protect, at a minimum, the critically endangered species on the PASL.

C. Department of Interior Budget Cuts Are Harming the Listing Program.

Recently, OES was ordered to reduce the number of species on its FY 81 PASL to reflect "more realistic numbers;" OES complied and cut the PASL to only 100 species. The reduction in species on the PASL was not biologically based. Rather it reflected the DOI's desire to cut the budget.

At the same time, DOI announced a shift from species listing to species recovery. That shift of emphasis was reflected in the FY 82 DOI budget by a 43% reduction (\$3.4 million to \$1.9 million) in funding for listing from the Carter FY 82 request. For FY 83, DOI has recommended \$1.99 million for listing, which is a 5% increase over FY 82 but still represents more than a 40% reduction from previous requests. Because the listing process requires extensive travel, time-consuming field work, and detailed data analysis, these major budget cuts cannot be sustained without drastically affecting the listing process. Moreover, the shift to recovery will do nothing for the 400 critically endangered species that have not been listed.

In spite of the announced shift from emphasis on listing to recovery, the DOI recommended a massive 20% cut (\$7.5 million

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to \$6.0 million) in the funds to be used for recovery efforts from the Carter FY 82 requests, although Congress restored these cuts in recovery for FY 82. Recovery efforts also will be impacted greatly if the 100% reduction (\$4 million) in Section 6 monies for FY 82 is sustained in FY 83, as recommended by DOI. Clearly, the announced shift in DOI emphasis from listing to recovery is not supported by their budget recommendations.

D. DOI Has Stopped Listing Species.

The current administrators of DOI have listed only four new species packages since taking office over a year ago. It took eight months plus the threat of a lawsuit to get the Department to finalize three of these that had been listed by the prior Administration. The four species packages listed in 13 months by the Reagan Administration compares unfavorably to the more than 20 species that were listed in the last 12 months of the Carter Administration and to the 21 of species listed annually during the past eight years (Appendix 3).

The decision to list a species under Section 4 is legally limited to biological factors. However, since the issuance of E.O. 12291 by President Reagan, DOI has introduced economic factors into the listing process. As a result of this economic impact analysis, listings have been delayed. The use of the regulatory process as a way to introduce economic considerations into the listing process is illegal and has seriously and unnecessarily burdened the listing process.

Even the Solicitor's Office in DOI is being used to encumber the listing process. At one point last year, over 40 listing documents representing more than 90 species sat on the desk of the Solicitor three months awaiting his action. Since the new Administration took office, 36 "Determinations of Effects" sent to the Solicitor's Office by OES have been

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returned, even though they met DOI's new priority listing system. Many of the delays have been based on minor technicalities and, in some cases, the Solicitor has returned listing documents requesting information that had been supplied in the original Determination of Effects.

E. The Act Should Be Improved to Facilitate Listings

The 1978 amendments to the ESA required the designation of critical habitat as part of the listing process. The enactment of those amendments to Section 4 burdened the listing process with non-biological factors and, as a result, greatly decreased the number of listings. Excluding the listings that already had been proposed before the 1978 Section 4 amendments, there have been only 13 new listings since those changes; in only one of the 13 listings was critical habitat designated. Thus, the designation of critical habitat has failed on two grounds. First, it is not being designated. Second, it has delayed listings.

As a result, Section 4 of the ESA should be revised to expedite the listing of species, consistent with the following principles:

1. Listing should extend to all species of fish, wildlife, and plants as currently provided in the ESA.
2. Economic considerations should not enter the determination of whether a species is listed as threatened or endangered.
3. Listing decisions should be based exclusively on biological criteria, i.e., the best available scientific and commercial data.
4. Critical habitat designations should not be included as part of the species listing process. However, the Secretary should have the discretion to designate critical habitat independent of the listing process.

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5. Economic factors may be appropriate in determining the extent of critical habitat designations.

A revision of Section 4 that is consistent with these principles and that we support has been proposed by the Environmental Defense Fund (Appendix 4). That proposal establishes a more expeditious listing process and formalizes participation by professional scientific organizations and state and foreign conservation agencies to assure that listings have a solid scientific basis (§ 4(b)(2)). In addition, the proposed amendment would segregate the designation of critical habitat and associated economic considerations from the biological determination of listing. With economic considerations appropriately confined to designation of critical habitat, the revision would require that a final determination on a listing proposal be made within one year (instead of two years) of the general notice publication.

F. Controversial Listings Are Atypical

Much of the discussion concerning the listing process by other organizations has not focused on delays but rather on controversial proposals. However, only about 10 to 15 percent of all the listings proposed by FWS have been withdrawn. In those cases, public comment produced new information or FWS otherwise learned of unpublished data. In either situation, the listing process functioned exactly as Congress intended. Listing proposals should be expected to be challenged occasionally by other federal agencies or private industries and individuals. If those challenges produce new biological information on the status of the species in question, then the listing process is well served.

Only a handful of proposed listings have been seriously contested. Of these, none have approached the magnitude of

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disagreement that has surrounded the proposed listing of the Illinois mud turtle. We have concluded from our analysis that the Illinois mud turtle listing proposal was based on the best available scientific and commercial data and that the listing was justified at the time of the proposal and remains so today (Appendix 5).

Questions of whether species should be listed as endangered or threatened are, and should remain, biological decisions. As such, those decisions at the federal level are best made by agencies with the greatest amount of biological expertise, namely FWS and NMFS.

Nevertheless, steps should be taken to minimize the possibility of serious disagreements over the scientific evidence for listing a species. In our opinion the independent review panel selected by FWS was not useful in resolving the seriously contested proposal to list the Illinois mud turtle (Appendix 5). Instead, we suggest two steps, in addition to the proposed amendment to Section 4, to prevent or resolve future controversies over listing proposals. First, sufficient funds should be made available to FWS to conduct field investigations of candidate species where necessary as a complement to literature surveys and analyses. Currently, there is a trend in the opposite direction as a result of reductions in funds in the FY 82 and FY 83 budget proposals. Second, the Secretary of Interior should be encouraged to use his existing authority to hold legislative or adjunctive hearings as a means of resolving seriously contested listings.

G. The Act Should Facilitate the Reintroduction Of Endangered and Threatened Species

A final area that needs to be addressed in our discussion of Section 4 is the importance of facilitating reintroductions of endangered and threatened species. Many endangered species

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occupy only a small part of the suitable habitat within their historic ranges. Some species may be prevented from recolonizing suitable habitat by intervening areas of unsuitable habitat, and other species are so reduced in numbers that they cannot expand significantly on their own. The reintroduction of a species (an experimental population) into suitable but unoccupied habitat is a powerful tool for the recovery of a species. In those species, such as the whooping crane, that have been reduced to a single population, reintroductions also provide protection against sudden extinction by natural disaster.

FWS proposals to reintroduce endangered species have sometimes met with resistance from federal, state, and private sources. A primary concern that often arises is that the provisions of the ESA will limit current or future uses of the area in which the species is introduced. For example, wild populations of masked bobwhite were once totally exterminated within the United States, but now have been successfully reintroduced in one area in Arizona. Recent proposals for any additional reintroductions of the bobwhite were rejected by a mining company that owns suitable land because of concerns over potential critical habitat limitations and conflicts with Section 7 that might affect the company's future use of the water. The State of Arizona, although supportive of such reintroductions, is concerned that they may have to close a large area to hunting for three other quail species that are present to prevent hunters from being fined or jailed for accidentally shooting a masked bobwhite.

In another case, the reintroduction of Colorado squawfish into the Salt River of Arizona was opposed by federal and private groups for a variety of reasons; all centered around the effect of ESA provisions on watershed uses. Some private citizens also opposed the reintroduction on the grounds that it might reduce or eliminate sport fishing in the area. Because

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of the potential effects of Section 7, provisions of the ESA, the U.S. Forest Service, a local Indian tribe, and a number of mining companies were concerned that their respective activities would be restricted.

In view of the desirability and associated problems identified above of reintroducing populations of endangered species, the ESA should be amended to encourage the use of reintroductions as a tool for species recovery. Specifically, NWP recommends the addition of the following provisions:

1. Establish a new category for experimental populations under Section 3 and 4 of ESA.
2. Subject experimental populations to the provisions of the ESA concerning threatened species except as indicated below:
 - a. Place added restrictions on the designation of critical habitat for experimental populations.
 - b. On all lands and waters outside the National Park System, the National Wilderness Preservation System, and the National Wildlife Refuge System, experimental populations, although subject to Subsection 7(a)(1) of the ESA, shall be treated under subsections 7(a)(3) and 7(c) as though they were species proposed to be listed.
 - c. Notwithstanding paragraphs a and b, experimental populations shall be afforded all the protective provisions of the ESA, if the population is necessary for the continued existence of an endangered species.

III. SECTION 6

Section 6 was enacted to encourage state and federal cooperation in the effort to conserve endangered and threatened species. This cooperation is made possible by three provisions of Section 6. First, federal agencies are required to consult with the states before they acquire land or water for

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endangered or threatened species. Second, federal agencies and states are allowed to engage in joint agreements for the management of areas established for protected species. And third, state agencies are permitted to assume important responsibilities for the conservation and management of endangered and threatened species through cooperative agreements. Congress invited the states to participate in the federal endangered and threatened species program by providing federal grant-in-aid matching funds for states with approved management programs.

A. A Strong State/Federal Partnership Is Needed

Congress' reasons for encouraging active state involvement in the endangered and threatened species program are apparent. For one, Congress was sensitive to the fact that ESA authorized federal agencies to become actively involved in the day-to-day management of endangered and threatened species, an area traditionally within the province of the states. Through the cooperative agreement provisions of Section 6, Congress intended to vest much of the responsibility for managing federally protected species in state officials. Furthermore, Congress wanted the valuable personnel resources and expertise of the state fish and game agencies to be utilized in its endangered species program. The Administration's FY 83 budget proposal will leave the Fish and Wildlife Service with only 160 field law enforcement agents, down from 202 in FY 82, while the states have over 5,000 conservation officers. Likewise, the Fish and Wildlife Service has only a few hundred biologists, compared to the several thousand professional fisheries and wildlife biologists employed by the States. Finally, Congress recognized the need for a strong federal/state partnership because the habitat of most protected species is on state-owned or private property.

Thirty-nine states have entered into 49 Cooperative Agreements (38 for wildlife, 11 for plants) under Section 6.

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(See Appendix 3 for a list of these states.) Each of these agreements contains provisions that are important to the management of endangered and threatened species. Most importantly, the agreement establishes a cooperative management program that, in part, (1) authorizes the states to carry out activities that benefit endangered and threatened species, (2) commits the FWS to provide financial assistance to acceptable state management and recovery projects, (3) authorizes state law enforcement officials to enforce federal and state laws intended to conserve endangered and threatened species, (4) provides that the state and federal agencies will cooperate in efforts to benefit listed species, (5) makes federal funding contingent upon the "adequacy and activeness" of the state program to conserve federally-listed species, and (6) encourages the exchange of biological and other pertinent data to facilitate critical habitat determinations.

B. The Value of Section 6

Section 6 has been tremendously successful. Thus far, \$24 million has been spent by the states for endangered species management. This is approximately 21% of the total annual appropriations level of funding for ESA for the fiscal years 1976 through 1981 (Appendix 5). The states have made good use of these funds by providing recovery efforts, research, surveys, law enforcement, land acquisition, and public information/education programs for 88 federally-listed and 173 state-listed and candidate endangered or threatened species.

State programs, funded through Section 6, represent most or all of the current work on many endangered species. These programs are of paramount importance in achieving the goal of species recovery. Zero-funding of Section 6 will severely limit or eliminate many of the following recovery efforts.

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Some state programs employ reintroductions to restore species to their historic range. For example, human activity has left only widely scattered islands as suitable habitat for the Delmarva Peninsula fox squirrel. The squirrels can not cross the intervening "oceans" of developed land on their own. Without an active translocation effort, the species will remain endangered, limited to the few areas it now occupies. The State of Maryland is conducting a very successful reintroduction program, totally funded through Section 6. The program cannot continue at the current level in the absence of federal matching funds, and without a reintroduction program the Delmarva Peninsula fox squirrel probably will not recover from its endangered/threatened status.

Other Section 6 programs attempt to reduce mortality, usually through increased law enforcement. Outboard motorboats pose one of the greatest threats to the survival of the West Indian manatee in Florida. Injuries caused by collisions with boats and engine props are the major cause of death among manatees. Reducing human-caused mortality is an important part of the manatee recovery effort. Boating speed limits have been imposed to protect manatees in their wintering areas, but to be successful the limits must be strictly enforced. Using Section 6 funds, the State of Florida added seven additional law enforcement officers and increased the use of aircraft for enforcement. They also mounted a very successful education program to increase public awareness of the manatee's problems. Without Section 6 funding, the law enforcement effort will be reduced and the species will suffer.

When habitat losses seriously threaten an endangered species, Section 6 funds have been used to identify and acquire important habitats. Loss of roosting, nursery and hibernation caves due to destruction or human disturbance is the major threat to the endangered Indiana bat in Arkansas, Missouri and New York. Section 6 funding has been used to identify

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important areas and protect eight caves through land acquisition, cooperative agreements with landowners, and barred entrance gates. Efforts to protect this unique habitat are essential to the recovery of the species and will suffer or be discontinued without continued federal matching funds.

Research is basic to understanding the needs of any species. Over half of the total research effort on the southern sea otter is conducted with Section 6 funds by the state of California. The program includes an important mortality study which is providing valuable insight on natural and human-induced deaths. By monitoring tagged animals the state is collecting life history data necessary to scientifically manage the otter. Unless Section 6 funding is restored, state research may cease and the continuity of the data will be lost. Without sufficient baseline data, management decisions are open to errors that many endangered species cannot afford.

Reintroduction, law enforcement, habitat acquisition, and research all contribute to the major purpose of the act, which is to promote the recovery of endangered or threatened species to the point where such stringent protection is no longer needed. The Administration has repeatedly stressed the importance of, and their commitment to, species recovery. Yet this Administration has proposed zero funding for Section 6, an action that will seriously undercut the role of the states in endangered species management. This contradicts the clear and often-stated Administration position of a greater role for the states. The states expect to lose 199 state agency and contract personnel from 1981 levels due to the loss of funding (Appendix 5). Some states have already lost personnel and cut back programs and some will likely give up their endangered species programs entirely.

Section 6 has done more than just benefit endangered and threatened species. Many other plants and animals have benefited from ecosystems conserved primarily for species that are endangered or threatened. Recreational opportunities have been provided where compatible, such as at the wildlife management area acquired with Section 6 funds at Cape May, New Jersey. In addition to benefitting bald eagles and peregrine falcons, this 400 acre parcel of land supports a healthy ecosystem that attracts individuals who hunt, birdwatch, study nature, or just seek moments of freedom from urban settings.

Finally, educational programs, funded through Section 6, have been conducted to inform the public of resident species in trouble, and the destructive impacts man has had on all life forms. Improvement in state law enforcement efforts benefit other wildlife besides listed species.

C. A Greater State Role Is Needed Under Section 6

Congress should restore funds for Section 6 in order to maintain continuity of existing cooperative agreements and to support an effective ESA. The suddenness by which the states lost their funding has weakened confidence in the program and has called into question Congress' commitment to see that the states have a role in management. These problems can be offset by the restoration of funding for Section 6 and a guarantee that a minimum of 20 percent of the annual funds appropriated under ESA would be designated for the states. Additionally, the cost-sharing formula of Section 6 should be changed to one fourth state, three-fourths federal. This would bring it into line with other federal/state cost sharing programs for fisheries and wildlife conservation as provided for under the Federal Aid in Wildlife Restoration and Federal Aid in Fish Restoration Acts.

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Currently FWS unilaterally establishes priorities for state programs under Section 6. Because Congress intended that Section 6 activities be cooperative, the states should have greater say in the establishment of priorities for state programs.

IV. Section 7

Section 7 is the cornerstone of ESA. It provides the mechanism that permits development to proceed while simultaneously protecting endangered species. The loss of a strong consultation process would eliminate this dynamic component, essentially cripple the Act, and result in confrontations that would be harmful to development and endangered species alike.

A. Section 7 Is Working Well

Section 7 has worked. It has protected endangered and threatened species while not unduly encumbering development through prolonged and extended consultations or by blocking federal projects. The consultation process has not been used to block federal actions that would adversely impact a listed species, but instead it has served to provide a forum in which prudent and reasonable alternatives have been developed to permit the completion of a project while protecting endangered species.

In recent weeks, NWF staff completed a comprehensive review of the FWS's Section 7 activities. The picture that emerged from our work and the findings presented below demonstrate that Section 7 is working.

1. Section 7 Is Not Delaying Projects

Section 7 requires that FWS issue an opinion within 90 days (3 months) after initiation of formal consultation. A complaint frequently aired is that consultation agencies are not complying with this time restriction. That is clearly not the case. We examined the more than 600 opinions issued between 1979 and 1981 by FWS to determine the average consultation time per opinion (Appendix 7, Table 1). The results of this analysis show that FWS was well within the 90-day limit with an average of 78 days (2.6 months) per opinion. The preparation of some opinions did exceed the 3-month period, but this was infrequent and usually occurred where extensions had been mutually agreed to by FWS and the action agency. Thus, FWS records demonstrate that consultation has not delayed federal projects. Calls to amend Section 7 because a few projects have been delayed should be viewed with skepticism.

Even the agencies involved in the consultation process agree that it is working smoothly as indicated by the following:

I would like to express my appreciation for the cooperation and assistance provided by the endangered species staff of the Atlanta region in completing Section 7 consultation for the natural gas pipeline conversion project proposed by Florida Gas Transmission Company (your log number 4-3-80-A-32).

In my May 13, 1980, letter to your office, I requested that formal consultation be completed as quickly as possible because of environmental hearings scheduled in mid-June. The endangered species staff's response to our request far exceeded the normal level of cooperation and effort found in our work with other agencies. The biological opinion for the project was completed and mailed by June 16, 1980. Messrs. Ernest Douglas and James Baker of the Jackson and Jacksonville offices, respectively, were especially helpful in answering our numerous inquiries and in promptly reviewing our biological assessment.

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We look forward to working with your office again in coordinating our responsibilities with regard to endangered species.

Letter to Kenneth Black, FWS
Regional Director from
Michael Sotak, Federal
Energy Regulatory Commission,
June 25, 1980.

"We believe that there have been few instances in Region 6 where projects have been delayed solely because of the ESA. In most cases there have been other problems that would have delayed the project even if the ESA did not exist."

Director, FWS Region 6
November 13, 1981

"We have not witnessed any attempts to circumvent the Section 7 consultation process. The approximate [sic] 30 federal agencies we deal with have all responded to the need to consult when required. To our knowledge we have not delayed any consultee's action. On the contrary, we have been complimented by at least the National Park Service and Forest Service on our ability to expedite consultations to accommodate their sometimes tight schedules."

Director, FWS Region 2
November 9, 1981

"There have been no conflict cases in Region 7, nor, to our knowledge, have any projects been delayed as a result of Section 7 consultation."

Director, FWS Region 7
November 17, 1981

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2. Agency Cooperation and Experience Have Made the Consultation Process More Efficient Than Congress Required

Interagency cooperation has substantially increased the efficiency of the consultation process and has reduced the number of conflicts. The agencies, working within the procedural framework of Section 7, have increasingly relied on informal consultation. Through that informal process, project changes are suggested and made that result in a "no-effect" determination. Thus, formal consultation is avoided. Examination of the recent trends in the number of informal and formal consultations conducted by FWS (Appendix 7, Table 2) demonstrates this point. As the number of informal consultations has increased, formal consultations and jeopardy opinions have correspondingly decreased (Appendix 7, Figure 1).

These data demonstrate that an increasing number of conflicts are being resolved during informal consultation, well before formal consultation would have to be initiated. As more agencies realize that most problems can be resolved during preliminary informal discussions, the trend of fewer formal consultations can be expected to continue. This may also be a sign that agency opposition to the endangered species program is decreasing.

The decline in the number of jeopardy opinions that paralleled the drop in formal consultations between 1979 and 1981 demonstrates the importance of informal consultation. Section 7 works. Furthermore, it will become increasingly efficient as more agencies decide to initiate consultation during the early stages of a project. The agencies agree on this point:

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"The fact that there are so few irresolvable conflicts is a demonstration of the overall success of the consultation process. Early informal consultation may result in project changes. These changes may result in a no-effect to endangered and threatened species from the project and thus not require formal consultation."

Director, FWS Region 6
September 8, 1981

"In fact, we have had great success in avoiding potential endangered species conflicts without necessitating formal consultation. Ninety percent of potential endangered species conflicts in Region 7 are resolved through informal consultation proceedings."

Director, FWS Region 7
October 16, 1981

3. Section 7 is not Stopping Projects

The fear that Section 7 would become a major source of frustration for developers has proven groundless. In other words, Section 7 is not stopping projects. A review of the more than 150 agency projects receiving jeopardy opinions between FY 1979 and FY 1981 shows that Section 7 has rarely been responsible for the withdrawal or cancellation of a project. Even the most controversial projects--Tellico Dam, the Beaufort Sea OCS oil and gas leases, the O'Neill Unit, and Grayrocks Dam--have either been constructed or allowed to proceed. To date the consultation process has provided the channel through which even the most difficult conflicts have been resolved. Section 7 might well be considered the "living" part of the Act.

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The large number of jeopardy cases that have been successfully resolved through formal consultation demonstrates that Section 7 is working and that consultation has not blocked federal projects, even those that would have jeopardized an endangered species.

The agencies agree, as evidenced by these comments from FWS files:

"Every jeopardy biological opinion we have issued to date (over 20 of them), has included reasonable and prudent alternatives that would still allow a project to proceed. Thus, we have not stopped a single project. Even the Grayrock Dam Project had reasonable and prudent alternatives but the Basin Electric Power Cooperative requested the Corps of Engineers to go the exemption route rather than accept the alternatives."

Director, FWS Region 6
September 8, 1981

"There have been no irresolvable conflicts. Those projects that appeared to be the least compatible with listed species were not begun for reasons other than endangered species."

Director, FWS Region 1
November 25, 1981

4. Section 7 Protects "High Profile" Species

NWF examined the jeopardy opinions on file at the Office of Endangered Species that were issued between 1979 and 1981 to determine which species have been most frequently the subject of jeopardy opinions. The results (Appendix 7, Table 3) show that this nation's symbol, the American bald eagle, was the species most frequently involved in jeopardy opinions. Another "high profile species," the peregrine falcon followed the bald eagle. When viewed by taxa (Appendix 7, Table 4), birds were involved in the greatest number of jeopardy opinions (33%), followed by mammals (19%), and then plants (16%).

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Any belief that only "insignificant" species interfere with federal projects is clearly off-base.

5. Section 7 Also Benefits Nonendangered Species

In addition to its success in balancing development with the protection of threatened and endangered species, Section 7 has provided several other benefits. In many instances, agencies consulting on a project have established precedents by adopting guidelines and model programs for their use in future Section 7 work. Although these benefits were unanticipated, they nonetheless bear further testament to the value of the consultation process.

Some specific examples of these secondary benefits that have been cited by FWS Regional Offices are discussed below:

1) Based on information gained through various consultations, the Region 4 Office has also produced a set of State Survey Guidelines that the Office now uses as a data base for decisions under Section 7 regarding endangered species.

2) Important management information regarding endangered species is often uncovered during surveys conducted in compliance with the Endangered Species Act. For example, in Nebraska during a spring and fall consultation survey a large bald eagle concentration was found on the Niobrara River.

3) Consultation on the Beaufort Sea oil and gas lease sale resulted in the development of standard stipulations for oil and gas leases designed for the protection of endangered and threatened species.

4) An informal and then formal consultation with the Bureau of Indian Affairs (BIA) on the Flathead Reservation resulted in a two-year research program funded by BIA and the development of a grizzly bear management plan on the Kootenai-Salish Tribal Council reservation. The Interagency Guidelines for Management of Grizzly

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Bears in the Greater Yellowstone Ecosystem were largely developed to assist managers in designing and evaluating projects to benefit or minimize impact on grizzly bears and facilitate the consultation process.

5) The transmission line construction guidelines issued by the Rural Electrification Administration were largely the result of consultations and interaction with FWS.

B. Problems Implementing Section 7

Although Section 7 is largely satisfying the requirements of the Act, there are several problems with its implementation that we discuss below.

1. DOI Is Weakening Section 7 Administratively

Two recently issued DOI Solicitor's opinions have seriously weakened Section 7. Both opinions reverse earlier, more protective opinions.

In the first, issued August 27, 1981, it was determined that the cumulative impact of "other" federal projects that have not been reviewed under Section 7, are not to be considered when analyzing the impact of the federal project at issue. This novel approach to cumulative impact analysis is rationalized by a "first-in-time", "first-in-right" mentality. In other words, each federal project is allotted a share of the responsibility for a species' extinction, so long as it is not the last in line and the project that pushes the species over the brink into extinction. This is inconsistent with Congress' objective that endangered and threatened species should be restored to healthy populations (16 U.S.C. § 1531(b)).

The need to consider a project's cumulative effects on endangered species cannot be overemphasized. For activities involving western inland waters, such as irrigation, hydroelectric generation, and flood control projects, it is especially important that cumulative impacts be evaluated. This is best illustrated by the following example.

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In 1978, the FWS was requested to initiate formal consultation on a western water project, the Upalco Unit of the Central Utah Project. The project's sponsors said the Unit would provide water for irrigation, and municipal and industrial use, in addition to providing flood control. The Upalco Unit consists of a dam, reservoir, and a series of distribution channels in the Green River System. The endangered humpback chub and the Colorado squawfish would have been impacted by the project and were therefore considered in the biological opinion.

In its June 1, 1979 biological opinion, FWS concluded that the Upalco Unit, "in and of itself," would not jeopardize the continued existence of either species, nor would it destroy their critical habitat. However, when the Unit's impacts were considered in concert with other water developments in the Green River drainage that could be expected to be completed during the life of the project, FWS found jeopardy for both species. Jeopardy was based on the projected cumulative depletion of water in the Green River System.

The Green River is the last remaining habitat of the Colorado squawfish and the humpback chub. Largely due to water projects along the drainage, the river has undergone extensive physical, chemical, and biological changes. As increasing volumes of water are diverted from the river, there is a concomitant decline in the amount, variety, and quality of habitat available for endangered fishes. This leads to increased competition for food, greater vulnerability to predators, and a greater likelihood for disease outbreaks and die-offs. Clearly, then, continued unregulated dewatering of the Green River represents a serious threat to the survival of the Colorado squawfish and the humpback chub.

Had FWS ignored cumulative effects in preparing its biological opinion for the Upalco Unit, there is little doubt that the Colorado squawfish and humpback chub would be a great

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deal closer to extinction today. The need to evaluate cumulative effects is essential if the ESA is to provide meaningful protection for threatened and endangered species. NWF vigorously supports the consideration of cumulative effects in biological opinions and we encourage Congress to ensure that this vital aspect of the consultation process is retained, whether through legislation or report language.

On August 31, 1981 a second solicitor's opinion was issued. It determined that Section 7 does not apply to federal actions in foreign countries. This is quite surprising in light of Congress' strong commitment under ESA to international conservation of endangered species and Congress' strong desire that all endangered and threatened species be protected as opposed to just those in the United States.

Upon examining the biological opinions on file at the Office of Endangered Species, NWF found only one extraterritorial consultation that had been completed between 1978 and 1981. The action under review was a permit application by the National Institute of Health-National Academy of Sciences to do research on gibbons in Malaysia. The only other evidence of extraterritorial consultation was an informal review of a project in Sri Lanka (Ceylon) that involved elephants.

The importance of involvement of the FWS in foreign consultations is being well documented in a series of articles now appearing in the OES' Endangered Species Technical Bulletin. The most recent article focuses on the Western Hemisphere Convention and its importance in providing an international framework for wildlife conservation. International efforts are, and should be cooperatively handled by the FWS, Office of Endangered Species and International Affairs Office. The benefits to be gained for both endangered species and the involved countries by such work are significant.

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It seems obvious that a need exists for the involvement of FWS in international conservation of endangered species strictly on the basis of those species already listed. Of the 756 species listed as of January 1982, 468 or 62% occur only in other countries. An additional 50 listed species (7%) are found in the U.S. and one or more other countries.

2. Agencies Do Not Always Comply With Section 7

Most federal agencies are sensitive to their obligations under Section 7 and are extremely cooperative in all phases of the consultation process. Isolated instances have arisen, however, in which agencies knowingly breached their responsibilities under Section 7. By identifying and discussing these problems we hope that future abuses and conflicts can be avoided.

Surprisingly, the Environmental Protection Agency (EPA), has resisted its responsibilities under Section 7. On two occasions EPA has registered a pesticide before formal consultation was completed under Section 7. On one occasion, EPA initiated formal consultation on the expanded use of carbofuran and chlorpyrifos in January 1981. Yet, almost three months before FWS issued its biological opinion on carbofuran, and a month and a half before an opinion was issued for chlorpyrifos, EPA registered the pesticides. The seriousness of this situation is evident from the fact that the proposed EPA registration of carbofuran and chlorpyrifos received jeopardy opinions from FWS; carbofuran was found to be likely to jeopardize three species, and chlorpyrifos was likely to jeopardize several species of birds, fish, mussels, insects, and two amphibians (Biological Opinions EPA-81-2, May 1, 1981; EPA-81-1, July 1, 1981). We encourage EPA's administrators to recognize their duties under Section 7 and to take immediate steps to improve their performance.

We want to underscore an earlier statement that these examples are isolated instances and are the exception rather than the rule. Nonetheless, NWP believes that the serious nature of these violations should be brought to Congress' attention.

In addition to proceeding before completion of consultation, at times agencies receiving a jeopardy opinion have ignored the opinion and proceeded with their project or action. The Act does not clearly define the deference that is due biological opinions issued by the wildlife agencies. The only recourse available to protect a species in these situations is for a private individual or organization to intervene by initiating legal action. Although the threat of lawsuits may have deterred agencies from ignoring jeopardy opinions thus far, we believe this is inadequate insurance to protect against such an event ever occurring.

3. Biological Opinions Do Not Document No-Jeopardy Findings

The majority of biological opinions issued by FWS have found "no effect." These opinions provide no documentation. Greater consistency in consultation would result if the wildlife agencies were required to document why a project is "not likely to jeopardize."

4. The Responsibility for Initiating Consultation Is Not Clear

Section 7 requires that an action agency conduct its own biological assessment. These assessments provide the basis for deciding whether formal consultation must be initiated. If the project is likely to affect a listed species, consultation must be initiated. On numerous occasions FWS has discovered that action agencies have overlooked species that may have been affected. Moreover, many action agencies do not have the expertise to make the "effect" determinations. Uncertainty in

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this critical step threatens the consultation process. We suggest that FWS conduct the biological assessments and that these assessments be funded by the action agency.

5. Application Of Section 7(d) Where There Is Inadequate Information

The purpose of the consultation process is to provide sufficient biological information to enable the "action agency" to determine whether its proposed activity is likely to jeopardize the continued existence of protected species or harm or destroy their habitat. The biological opinion required by Section 7(b) is the tool through which the consulting agency (wildlife agency) provides the action agency with the biological information that is necessary to guarantee compliance with ESA and suggested reasonable alternatives to avoid species jeopardy. Once formal consultation is begun, the consultation process is not complete until the wildlife agency issues the biological opinion. Formal consultation must be initiated if an agency action will affect an endangered or threatened species.

Section 7(d) was enacted in 1978 in the aftermath of Tellico Dam. It prohibits action agencies from making irreversible or irretrievable commitments of resources that would foreclose implementation of any reasonable and prudent alternative until the consultation process is completed; that is, until the biological opinion is issued. The purpose of Section 7(d) is to protect the integrity of the consultation process by prohibiting premature investments in a proposed action that would make it a fait accompli before consultation was completed.

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The problem arises when there is insufficient information available to complete consultation within the statutory 90 day time frame. The present approach is to simply proceed with investments, regardless of their size or "irreversibility", while leisurely proceeding to gather the necessary information to complete consultation. This approach invites future Tellico Dams and needs to be changed.

C. Western Water Projects

Several western water development interests are attacking the ESA. At issue are a series of water development projects, most which are situated in the Colorado River basin, that could adversely impact endangered species. Developers express dissatisfaction with the Act, claiming it has delayed projects, increased project costs, and opened projects to litigation. We disagree. FWS has acted responsibly under the Section 7 consultation process. Moreover, development has proceeded.

1. The Endangered Species Act Is Not a "Western Issue".

Western developers have stated that, because more than 60 percent of this country's listed species are found in states west of the Mississippi River, the ESA is a "western issue." If one considers that more than 70 percent of the U.S. land mass, excluding Alaska and Hawaii, lies west of the Mississippi, it is not surprising that the majority of our threatened and endangered species reside in the west. However, of the more than 2,100 biological opinions issued between 1979 and 1981, fewer than 700 (or only 32 percent) involved western states. (FWS, OES files). The sweeping generalization that endangered species are a "western issue" is clearly inaccurate.

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2. The Endangered Species Act Has Not Unreasonably Delayed or Stopped Western Water Projects.

Assertions that the ESA has slowed unreasonably or stopped water projects are wrong. Although developers hastily focus attention on the more "controversial" western projects, one must understand that these projects are only a small percentage of all the water developments that have involved formal consultation. A skewed impression of the consultation process and western water projects emerges if one generalizes from these handful of projects.

Since 1979, FWS has issued biological opinions on at least 60 water resource projects (Table 1, Appendix 8). An analysis of these opinions yields some interesting findings. First, 7 (7%) of these projects would promote the conservation of a species, 40 (67%) would not jeopardize a species, and only 13 (22%) were likely to cause jeopardy. Second, the average time to complete consultation on these projects, including those for which consultation was re-initiated, was 113 days. However, when re-initiations are excluded from these totals, the average time per consultation drops to 84 days. This is within the 90-day statutory requirement of the ESA. Furthermore, the vast majority of the 60 water development projects are either presently under construction or else have been approved for construction.

Since Section 7 provides the mechanism for exempting problem projects, claims that a project has been stopped by ESA must be viewed with two criteria in mind. First, has a jeopardy opinion been issued and if so, is there an irresolvable conflict. Second, has the applicant agency applied for an exemption under Section 7(b). No western water project satisfies these criteria.

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3. Even the Most Controversial Western Water Projects Have Not Been Blocked.

As indicated above, almost all of the controversial water projects are located in the Colorado River Basin (Figure 1, Appendix 8). The controversy surrounding these projects must be put in perspective. They represent less than one percent of all the biological opinions issued in the last three years. And when viewed individually, of the 19 controversial projects for which consultation has been initiated, 14 or almost three-fourths, have either been completed, approved, or are under construction (Table 2, Appendix 8). It should be recognized that the remaining projects were not delayed or withdrawn because of conflicts with the ESA, but rather due to inadequate funding or extraneous litigation. Therefore, contrary to what has been claimed, the ESA has not prevented controversial western water projects from proceeding.

4. Endangered Species Impacted by Western Water Projects Must Be Protected.

Biological opinions on western water developments have involved only a limited number of species, most notably the Colorado River fishes. The Colorado squawfish was considered in 30 percent of the consultations and the humpback chub in 27 percent. Both of these species, endemic to the Colorado River basin, have recently suffered dramatic reductions in numbers and distribution (Figures 2 and 3, Appendix 8). Although logging activities, livestock grazing, agriculture, and irrigation have contributed to the species' demise, water development along the Colorado River is perhaps the greatest cause for the fishes' decline. What was once a great turbulent river that experienced tremendous fluctuations in flows, temperature, and turbidity has become a series of large ponds from which cold clear water is released in relatively constant

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temperatures and flows year round. Because native fishes were unable to adapt to new flow regimes, they have suffered.

Aside from the scientific and aesthetic merits for protecting these endangered fishes, the Colorado squawfish is of particular interest to fishery biologists because of its potential as a sportfish. Records show there was an historical fishery on Colorado squawfish and that the species was readily attainable and a preferred source of food. Indians quickly developed a commercial fishery on the squawfish to meet the demands of miners and settlers who regarded the fish highly.

Biologists who have worked with Colorado squawfish believe the species has superb sporting qualities and could some day provide an excellent sport fishery. In fact, some feel that the Colorado squawfish may be the only fish on which a sport fishery could be based in many stretches of the Colorado River. To jeopardize the continued existence of this, or any other endangered species, simply cannot be justified.

D. The Section 7 Exemption Process

Certain development organizations have criticized the Sections 7(q) and 7(h) exemption process as "time-consuming"^{1/} "unworkable,"^{2/} and in need of "streamlining." These sections allow a multi-member Endangered Species Committee to exempt certain projects from the requirements of Section 7. The Committee may exempt projects that pose an irresolvable conflict with the continued existence of endangered and

1/ Statement of Roland C. Fischer, Colorado River Water Conservation District, at Oversight Hearings on the Endangered Species Act before the Senate Subcommittee on Environmental Pollution, p. 6, attached to letter from Roland C. Fischer to the Honorable John H. Chafee, Chairman, Subcommittee on Environment and Public Works, January 8, 1982.

2/ Letter from J. Allen Overton, Jr., President, American Mining Congress, to the Honorable John H. Chafee, Chairman, Subcommittee on Environmental Pollution, January 8, 1982.

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threatened species if there are no reasonable and prudent alternatives to the project, if the benefits of the project clearly outweigh benefits of species conservation and if the project is of regional or national significance.
(Section 7(h)(A)).

1. A Proposed Amendment to Improve the Exemption Process.

Industry clamored for this amendment in 1978 to make Section 7 more flexible. Apparently, however, the flexibility they sought and agreed to did not go far enough. Even though the charges leveled against the exemption process are, so far, undocumented, NWP has proposed the following amendment to ESA that is a further reasonable compromise and adequately addresses the new fears of industry. The proposed amendment:

- (1) Eliminates the Review Board established under Section 7(g);
- (2) Reduces the processing time from a maximum of 450 days under the current process to a maximum of 195 days, which includes 90 days for the submission of an exemption application;
- (3) Vests the application screening responsibilities of the Review Board at the Secretarial level through a "certification" process;
- (4) Maintains important fact finding responsibilities with the administrative law judge; and
- (5) Includes other time reductions.

The Act would be amended as follows:

1. Delete all of Subsection 7(g) and substitute the following:

(g) APPLICATION FOR EXEMPTION AND CONSIDERATION BY AN ADMINISTRATIVE LAW JUDGE. (1) A Federal agency, the Governor of the State in which an agency action will occur, if any, or a permit or license applicant may apply to the Secretary for an exemption for an agency action of such agency if, after consultation under subsection (a)(2), the Secretary's

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opinion under subsection (b) indicates that the agency action would violate subsection (a)(2). An application for an exemption shall be considered initially by the Secretary and shall be considered by the Endangered Species Committee for a final determination under subsection (h) after a report is made by the Administrative Law Judge. The applicant for an exemption shall be referred to as the "exemption applicant" in this section.

(2)(A) An exemption applicant shall submit a written application to the Secretary, in a form prescribed under subsection (f) of this section, not later than 90 days after the completion of the consultation process; except that, in the case of any agency action involving a permit or license applicant such application should be submitted not later than 90 days after the date on which the Federal agency concerned takes final agency action, for purposes of chapter 7 of title 5, United States Code, with respect to the issuance of the permit or license. Such application shall set forth the reasons why the exemption applicant considers that the agency action meets the requirements for an exemption under this subsection.

(B) Upon receipt of an application for exemption for an agency action under paragraph (1), the Secretary shall promptly (i) notify the Governor of each affected State, if any, as determined by the Secretary, and request the Governors so notified to recommend individuals to be appointed to the Endangered Species Committee for consideration of such application and (ii) publish notice of receipt of the application in the Federal Register including a summary of the information contained in the application and description of the Federal action.

(3) An Administrative Law Judge shall be selected for the purpose of considering an exemption application certified by the Secretary under paragraph (4)(A) of this subsection and submitting a report to the Endangered Species Committee under this subsection.

(iii) The Administrative Law Judge shall be selected by the Civil Service Commission in the same manner as administrative law judges are selected under section 3344 of title 5 of the United States Code to be detailed to an agency which occasionally or temporarily is insufficiently staffed with administrative law judges. The use of such an administrative law judge shall be on a reimbursable basis.

(4) The Secretary shall, within 15 days of the receipt of an exemption application either (A) submit to the Administrative Law Judge the application and a written certification that the Federal agency concerned and such exemption applicant has -

(i) carried out its consultation responsibilities as described in subsection (a) in good faith and made a reasonable and responsible effort to develop and fairly consider modifications or reasonable and prudent alternatives to the proposed agency action which would not violate subsection (a)(2);

(ii) conducted any biological assessment required of it by subsection (c); or

(B) deny the exemption application because the Federal agency or the exemption applicant have not met their respective requirements under subclause (i) or (ii) of this paragraph. Such a denial shall be considered final agency action for purposes of chapter 7 of title 5 of the United States Code.

(5) The Secretary shall, within 30 days of the submission of the application and certification under paragraph 4(A) submit to the Administrative Law Judge, in writing, his views and recommendations with respect to the application.

(6) If the Secretary submits a written certification under paragraph 4(A), the Administrative Law Judge shall proceed to prepare the report to be submitted under paragraph (7).

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(7) Within 150 days of receipt of the certification under paragraph (4)(A), the Administrative Law Judge shall submit to the Committee a report based upon the record of a hearing before him discussing -

(A) the availability of reasonable and prudent alternatives to the agency action, and the nature and extent of the benefits of the agency action and of alternative courses of action consistent with conserving the species of the critical habitat;

(B) a summary of the evidence concerning whether or not the agency action is in the public interest and is of national or regional significance;

(C) appropriate reasonable mitigation and enhancement measures which should be considered by the Committee;

(D) whether the Federal agency concerned and the exemption applicant refrained from making any irreversible or irretrievable commitment of resources prohibited by subsection (d).

(8) To the extent practicable within the time required for action under subsection (g) of this section, and except to the extent inconsistent with the requirements of this section, the consideration of any application for an exemption under this section and the conduct of any hearing under this subsection shall be in accordance with sections 554, 555, and 556 (other than subsection (b)(3) of section 556) of title 5, United States Code.

(9) In carrying out its duties under this subsection, an Administrative Law Judge may -

(A) sit and act at such times and places, take such testimony, and receive such evidence, as he deems advisable;

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(B) subject to the Privacy Act of 1974, request of any Federal agency or applicant information necessary to enable it to carry out such duties, and upon such request the head of such Federal agency shall furnish such information to the Administrative Law Judge, and

(C) use the United States mails in the same manner and upon the same conditions as a Federal agency.

(10) Upon request of the Administrative Law Judge, the head of any Federal agency is authorized to detail, on a nonreimbursable basis, any of the personnel of such agency to the review board to assist it in carrying out its duties under this section.

(11) The Administrator of the General Services Administration shall provide to the Administrative Law Judge, on a reimbursable basis, such administrative support services as he may request.

(12) All hearings and records of the Administrative Law Judge shall be open to the public.

2. DELETE ALL OF SUBSECTION 7(h) and SUBSTITUTE THE FOLLOWING:

(h) EXEMPTION. (1) The Committee shall make a final determination whether or not to grant an exemption within 60 days of receiving the report of the Administrative Law Judge under subsection (g)(7). (2) Except as provided in paragraph (3) of this subsection the Committee shall grant an exemption from the requirements of subsection (a)(2) for an agency action if, by a vote of not less than five of its members voting in person -

(A) it determines on the record, based on the report of the Administrative Law Judge and on such other testimony or evidence as it may receive, that -

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(i) there are no reasonable and prudent alternatives to the agency action;

(ii) the benefits of such action clearly outweigh the benefits of alternative courses of action consistent with conserving the species or its critical habitat, and such action is in the public interest; and

(iii) the action is of regional or national significance; and

(B) it establishes such reasonable mitigation and enhancement measures, including, but not limited to, live propagation, transplantation, and habitat acquisition and improvement, as are necessary and appropriate to minimize the adverse effects of the agency action upon the endangered species, threatened species, or critical habitat concerned.

(3) The Committee shall deny an exemption from the requirements of subsection (a) (2) for an agency action if the Administrative Law Judge report submitted to the Committee under subsection (g) (6) concludes that the Federal agency or the exemption applicant made any irreversible or irretrievable commitment of resources prohibited by subsection (d) and the Committee concurs with that conclusion.

Any final determination by the Committee under this subsection shall be considered final agency action for purposes of chapter 7 of title 5 of the United States Code.

(4)(A) Except as provided in subparagraph (B), an exemption for an agency action granted under paragraph (1) shall constitute a permanent exemption with respect to all endangered or threatened species for the purposes of completing such agency action -

(i) regardless whether the species was identified in the biological assessment; and

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(ii) only if a biological assessment has been conducted under subsection (c) with respect to such agency action.

(B) An exemption shall be permanent under subparagraph (A) unless -

(i) the Secretary finds, based on the best scientific and commercial data available, that such exemption would result in the extinction of a species that was not the subject of consultation under subsection (a)(2) or was not identified in any biological assessment conducted under subsection (c), and

(ii) the Committee determines within 60 days after the date of the Secretary's finding that the exemption should not be permanent.

If the Secretary makes a finding described in clause (i), the Committee shall meet with respect to the matter within 30 days after the date of the finding.

The above recommended amendments are made with two important thoughts in mind. First, the Administrative Law Judge does not have the authority to review the merits of the Secretary's biological opinion issued under subsection 7(b); he must accept the opinion of jeopardy as a given. Review of the biological opinion should be left to the courts. In turn, the Administrative Law Judge's review is limited to those factors of concern to the Committee. Second, the Administrative Law Judge may not consider financial or other resource commitments to the project in his evaluation of the reasonableness of alternatives under subsection 7(g)(7)(A). The consideration of such financial or resource commitments would clearly bias the review of alternatives.

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VIII. Section 8

Section 8A of the ESA implements the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). While the ESA is a federal law that protects species threatened with extinction, CITES is a treaty that protects species that may be overharvested as a result of international trade. Article IV of CITES contains three appendices under which animals and plants in need of protection from international trade are listed. Species are afforded a different level of protection under each of the appendices. Appendix II covers "all those species which, although not necessarily now threatened with extinction, may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival." The effectiveness of international efforts in wildlife conservation is largely dependent on CITES. But CITES does not apply, nor was it ever intended to apply, to most species listed as threatened or endangered under the ESA.

A. The Bobcat Controversy Did Not Result from a Problem with the ESA

The bobcat is an example of a species that is not listed as threatened or endangered and, therefore, not regulated under the ESA. Unfortunately, however, a number of organizations and publications have unfairly characterized the Act as seriously flawed because of problems with the export of bobcat pelts. In reality, the regulation of bobcat exports is a problem with CITES and, thus, the issue is only peripherally related to the ESA. The controversy surrounding the bobcat, as summarized below, can and should be resolved quickly so that the focus of interest on the ESA is not diverted from the critical issues involving Sections 4, 6, and 7.

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.. The bobcat was included under Appendix II of CITES along with all other species of cats (except the house cat and those species already listed in Appendix I) in February 1977. The United Kingdom proposed the listing. Although that proposal presented no data to support placing the bobcat on Appendix II, the U.S. did not object to the listing, fearing that it would undermine CITES and precipitate a country-by-country review and rejection of other species listings. If the bobcat was to be considered today for listing on Appendix II, it would be rejected because the best available data suggest that this species is not in danger of being overharvested as a result of international trade. Consequently, NWF has supported the petition by the U.S. to remove the bobcat from Appendix II.

Federal regulation of the export of bobcat pelts under CITES has resulted in unnecessarily burdensome oversight of state management of bobcats. Harvest of resident species such as the bobcat is regulated by the states. In 1980-81 the bobcat was managed by 37 states as a furbearer or game animal. Eleven other states protect bobcats from any harvest. However, because the bobcat also is a species subject to the provisions of CITES, the United States is required to designate a scientific authority (FWS) to ensure that export of pelts will not be detrimental to the survival of the species. To implement the requirements of CITES and ESA, FWS reviews information submitted annually by states to determine whether the export of bobcat pelts will be detrimental to that species. Annual requirements to develop and submit a scientific document on the status of a resident, managed species for FWS approval are time-consuming, costly, and most importantly, unnecessary to prevent overharvest.

The final area of controversy surrounding the bobcat concerns the ruling by the U.S. District Court of Appeals for

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the District of Columbia. Before this ruling, FWS determined whether the information supplied by the states satisfied certain guidelines and, based on that finding, whether the planned harvest would be detrimental to the bobcat. Those guidelines specified the minimum biological information needed for a no detriment finding and included: (1) population trend information; (2) information on total harvest levels; (3) information on distribution of the harvest; and (4) habitat evaluation. The Court of Appeals, however, found that these no detriment guidelines were not adequate and that new guidelines must be issued which require "a reliable estimate of the total number of bobcats and the number of bobcats to be killed in the season." This requirement is unreasonable. The methodology to provide such estimates quite simply does not exist for bobcats or virtually any other species of wildlife. One of the key terms in the Court's required guidelines is "reliable," which presumably refers to precision and accuracy. Except for a few species of wildlife or under special conditions, statistically precise, accurate estimates of population size can not be made.

The other key term in the Court's guidelines is "total number." Virtually all management of wildlife relies on indices of total population size (such as the number of animals seen per mile or seen per hour), estimates of reproductive and survival rates, and measures of the physical condition of individuals and not on estimates of the total number of individuals.

FWS's requirement for population trend information is a standard that calls for the best available scientific evidence. Population trend information consists of data on relative population size, i.e., indices of population change from year to year. Examples of these measures of relative

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change include estimates based on indirect evidence, such as tracks or droppings. One of the best known examples of the use of such indirect evidence is the FWS survey of relative coyote abundance in the western U.S., which relies on counts of tracks.

B. A Legislative Solution to the Bobcat Problem is Needed

Because of the above problems with regulation of bobcat exports and because no acceptable administrative or judicial options remain, a legislative solution is needed.

Specifically, Section 8A of the ESA should be amended consistent with the following principles:

1. No detriment findings by the FWS under ⁱ Appendix II of CITES should not require reliable estimates of total population size.
2. To the extent possible, federal oversight, under CITES, of state management should be reduced. In particular, the yearly review and approval of state submissions seems unnecessarily burdensome. Instead, the harvest should be allowed as a matter of course unless the Secretary determines that the proposed harvest would be detrimental.
3. Any legislative solution to the bobcat problem should not undermine the goals of CITES. Thus, the ultimate decision regarding responsibility for no detriment findings must remain with the FWS.

IX. Section 9

Leaving no section of the Act untouched, ESA's detractors have also expressed grave concern over the regulatory interpretation given the term "harm" by FWS under ESA.^{3/}

3/ Section 9(a)(1) of ESA, 16 U.S.C. § 1538(a)(1), prohibits the taking of any species listed as endangered under ESA. "Take," as defined by Section 3(19) of ESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct." 16 U.S.C. § 1532(19). The meaning of "harm," is not defined by ESA.

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Specifically, they object to the inclusion of environmental modifications within the meaning of harm and imply that Congress intended that such modifications be dealt with solely under Section 7.

It is NWP's position that "harm" is legislatively a non-issue because the FWS recently redefined that term on November 4, 1981 (46 Fed. Reg. 54748) to address the exact concerns that are now being raised. Moreover, NWP believes that assertions that Congress did not intend to address environmental modifications that harm species under Section 9 are legally incorrect.

The most recent regulatory definition of harm is:

"Harm" in the definition of "take" in the Act means an Act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. 46 Fed. Reg. 54748, 54750.

According to FWS, "[t]he purpose of the redefinition was to preclude claims of a Section 9 taking for habitat modification alone without any attendant death or injury of the protected wildlife." Id. at 54748. Thus, claims that "harm" is now interpreted too broadly, as regards environmental modifications, are greatly overstated. Furthermore, if the interpretation of "harm" is the major problem it is claimed to be, one would expect demonstrable controversy, especially through litigation. That is not the case, however. FWS has never initiated a prosecution under any definition of harm. (See a 46 Fed. Reg. 29490.) And only one court has addressed the "harm" issue.

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In Palila v. Hawaii Department of Land and Natural Resources, 471 F.Supp. 985 (D. Haw. 1979) the court supported the proposition that habitat modification can result in a taking. The court found that feral goats and sheep were having a harmful effect on the habitat of the endangered palila. Citing the September, 1975 definition of harm (50 C.F.R. § 17.3), the court interpreted harm to include "environmental modification or degradation which actually injures or kills wildlife," and found that the destruction of habitat, which had a concomitant effect on the breeding, feeding, and sheltering of the palila, was preventing the palila population from expanding and achieving a non-endangered status.

NWP disagrees with those who claim that Congress intended to deal with environmental modifications solely under Section 7, and not Section 9. The purpose of ESA is to "provide a means whereby the ecosystems upon which endangered species ... depend may be conserved, [and] to provide a program for the conservation of such endangered species" "Conservation" is defined by ESA to mean the use of all methods necessary to bring the population of the species to the point at which it is no longer threatened or endangered." The proposed redefinitions of "harm" hardly contemplate the use of all methods necessary. Prohibiting harmful habitat modifications under Section 9 is a legitimate and necessary method of conserving endangered species.

Congress' intent that harm be broadly interpreted further supports the inclusion of harmful habitat modifications within the meaning of harm. The Senate wanted "take" to be "defined in the broadest possible manner to include every conceivable way in which a person can 'take' or attempt to 'take' any fish or wildlife." S. Rep. 93-307, p. 7. Meanwhile, the House supported the broad scope of "take": "'Take' is defined broadly. It includes harassment, whether intentional or not.

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This would allow, for example, the Secretary to regulate or prohibit the activities of bird watchers where the effect of those activities might disturb the birds and make it difficult for them to hatch or raise their young." H. Rep. 93-740, p. 11.

Protecting endangered species from adverse impacts on their habitat is essential to meeting the goals and purposes of ESA. Proposals that "harm" not include environmental modifications clearly weaken ESA's ability to conserve the ecosystems upon which endangered species depend. Thus, those who wish to weaken the effectiveness of the term "harm" must have compelling reasons. If they do, they have not come forward with those reasons, however. Again, there has never been a prosecution under the term "harm." If there are conflicts between development and species because of the term "harm," they are being concealed.

It is NWF's position that the meaning of "harm," should not be further compromised.

VII. CONCLUSION

Our comments on the implementation of the ESA and our suggested changes should leave no doubt that it is imperative to have a strong Act that protects all species. To this end, NWF stands prepared to work constructively with this Subcommittee and other organizations to achieve a 5-year reauthorization of an effective ESA.

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APPENDIX III

No. Species Listed Since ESA of 1973 (Calendar Year)¹

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u> [*]	<u>Total</u>
Mammals	158	3	2	85	1	1	28	1	0	279
Birds	169	0	3	36	3	0	1	0	0	212
Fish	39	0	3	2	5	2	1	4	0	56
Reptiles	27	0	1	27	4	6	4	8	0	77
Amphibians	6	0	0	7	2	0	0	1	0	16
Insects	0	0	0	8	0	0	0	5	0	13
Snails	1	0	0	0	0	7	0	0	1	9
Mussels	0	0	0	24	1	0	0	0	0	25
Other	0	0	0	0	0	1	0	0	0	1
Plants	0	0	0	0	4	18	36	2	3	63
Total	400	3	9	189	20	35	70	21	4	
Grand Total										751

1.

As defined in the ESA, "Species" includes subspecies; thus, the tree snails, actually an entire genus containing 41 subspecies, is listed here as a single species. The same standard applies to the gibbons.

* The effective dates for these 4 species listings took place after 20 January 1981.

APPENDIX IV

1/22/81

PROPOSED AMENDMENT TO SECTION 4

DETERMINATION OF ENDANGERED SPECIES AND THREATENED SPECIES

Sec. 4(a) GENERAL. - (1) The Secretary shall by regulation promulgated in accordance with subsection (b) of this section determine whether any species is an endangered species or a threatened species because of any of the following factors:

- (A) the present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) overutilization for commercial, sporting, scientific, educational or other purposes;
- (C) disease or predation;
- (D) the inadequacy of existing regulatory mechanisms;

or

(E) other natural or manmade factors affecting its continued existence.

(2) With respect to any species over which program responsibilities have been vested in the Secretary of Commerce pursuant to Reorganization Plan Numbered 4 of 1970 --

(A) in any case in which the Secretary of Commerce determines that such species should --

- (i) be listed as an endangered species or a threatened species, or
 - (ii) be changed in status from a threatened species to an endangered species, or
 - (iii) be subject to more restrictive regulations, in the case of threatened species,
- he shall so inform the Secretary of the Interior, who shall implement such action;

(B) in any case in which the Secretary of Commerce determines that such species should --

- (i) be removed from any list published pursuant to subsection (c) of this section;
 - (ii) be changed in status from an endangered species to a threatened species; or
 - (iii) be subject to less restrictive regulations, in the case of threatened species,
- he shall recommend such action to the Secretary of the Interior, and the Secretary of the Interior, if he concurs in the recommendation, shall implement such action; and

(C) the Secretary of the Interior may not list or remove from any list any such species, change the status of any such species which are listed, or make less restrictive the regulations applicable to any such species listed as threatened species, without a prior favorable determination made pursuant to this section by the Secretary of Commerce.

(b) BASIS FOR DETERMINATIONS. - (1) The Secretary shall make determinations required by subsection (a) of this section on the basis of the best scientific and commercial data available to him, taking into account those efforts, if any, being made by any state or foreign nation, or any political subdivision thereof, to protect such species, within any area under its jurisdiction, or on the high seas.

(2) The Secretary shall regularly review the status of all species which have been identified as in danger of extinction or likely to become so within the foreseeable future by any professional scientific organization, or subdivision thereof, or by any agency of a state or foreign nation responsible for the conservation of fish and wildlife, or plants, and shall propose for listing, pursuant to paragraph (5) of this subsection, any such species, or any other species, for which he determines there is substantial information that such species may be endangered or threatened.

(3) The Secretary shall, within 120 days of the receipt of a petition of an interested person under subsection 553(e) of title 5, United States Code, to add any species to or remove any species from either of the lists published pursuant to subsection (c) of this section, determine whether such petition presents substantial scientific information that such addition or removal may be warranted. If the Secretary determines that the petition presents such substantial scientific information, he shall promptly propose such addition or removal pursuant to paragraph (5) of this subsection.

(4) Except as provided in paragraphs (5) and (6) of this subsection, the provisions of section 553 of title 5, United States Code (relating to rulemaking procedures), shall apply to any regulations promulgated to carry out the purposes of this Act.

(5) In the case of any regulation proposed by the Secretary to carry out the purposes of this section with respect to the determination of the status and the listing of endangered or threatened species, the Secretary

(A) shall not less than 90 days before the effective date of the regulation --

(i) publish a general notice and the complete text of the proposed regulation in the Federal Register, and

(ii) give actual notice of the proposed regulation (including the complete text of the regulation) to the state agency responsible for the conservation of fish and wildlife or plants in each state in which the species is believed to occur, and invite the comment of such agency thereon;

(B) shall, insofar as practical, in cooperation with the Secretary of State, give notice of the regulation to each foreign nation in which the species is believed to occur or whose citizens harvest the species on the high seas, and invite the comment of such nation thereon;

(C) shall give notice of the regulation to such professional scientific organizations as he deems appropriate, and invite the comments of such organizations thereon;

(D) shall offer for publication in appropriate scientific journals the substance of the Federal Register notice referred to in subclause (i) of clause (A) of this paragraph;

(E) may, if requested to do so within 45 days after the date of publication of general notice, hold a public hearing thereon, and

(F) shall, within one year after the date of publication of general notice, publish a final determination with respect to such listing, with such determination based upon the factors set forth in paragraph (1) of subsection (a) of this section and not upon any other factors, including any that may be required by the Regulatory Flexibility Act, the Paperwork Reduction Act, Section 102(2)(C) of the National Environmental Policy Act, and Executive Order Number 12291, dated February 17, 1981.

(6) The Secretary may, at the time of listing or subsequent thereto, designate the critical habitat of any endangered or threatened species and promulgate appropriate protective regulations for threatened species as provided in subsection (d) of this section. The procedures that govern the designation of critical habitats and the promulgation of appropriate protective regulations for threatened species shall be the same as those that pertain to the listing of species under paragraph (5) of this subsection, except that in determining the critical habitat of any endangered or threatened species, the Secretary shall consider the economic impact, and any other relevant impacts, of specifying any particular area as critical habitat, and he may exclude any such area from the critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying the area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species.

(7) Neither paragraph (4) or (5) of this subsection nor section 553 of title 5, United States Code, shall apply to any regulation (including any regulation implementing section 6(g)(2)(B)(ii) of this Act) issued by the Secretary in regard to any emergency posing a significant risk to the well-being of any species of fish or wildlife, or plants, but only if (I) at the time of publication of the regulation in the Federal Register the Secretary publishes therein detailed reasons why such regulation is necessary, and (II) in the case such regulation applies to resident species of fish, wildlife, and plants, the Secretary gives actual notice of such regulation to the agency responsible for conservation of fish and wildlife or plants in each state in which such species is believed to occur. Any regulation promulgated under the authority of this paragraph shall cease to have force and effect at the close of

the 240-day period following the date of publication unless, during such 240-day period, the rulemaking procedures which would apply to such regulation without regard to this subparagraph are compiled with. If at any time after issuing an emergency regulation the Secretary determines, on the basis of the best scientific and commercial data available to him, that substantial evidence does not exist to warrant such regulation, he shall withdraw it.

(8) The publication in the Federal Register of any proposed or final regulation which is necessary or appropriate to carry out the purposes of this Act shall include a summary by the Secretary of the data on which such regulation is based and shall show the relationship of such data to such regulations.

(9) Any proposed or final regulation which specifies any critical habitat of any endangered species or threatened species shall be based on the best scientific data available, and the publication in the Federal Register of any such regulation shall, to the maximum extent practicable, be accompanied by a brief description and evaluation of those activities (whether public or private) which, in the opinion of the Secretary, if undertaken may adversely modify such habitat, or may be impacted by such designation.

(c) **LISTS.** - (1) The Secretary of the Interior shall publish in the Federal Register, and from time to time he may by regulation revise, a list of all species determined by him or the Secretary of Commerce to be endangered species and a list of all species determined by him or the Secretary of Commerce to be threatened species. Each list shall refer to the species contained therein by scientific and common name or names, if any, and shall specify with respect to each such species over what portion of its range it is endangered or threatened and specify any critical habitat within such range.

(2) Any list in effect on the day before the date of the enactment of the Endangered Species Act Amendments of 1982 of species of fish or wildlife, or plants determined by the Secretary to be threatened or endangered shall remain in effect unless and until changed in accordance with paragraph (5) of subsection (b) of this section.

(3) The Secretary shall --

(A) conduct, at least once every five years, a review of all species included in a list which is published pursuant to paragraph (1) and which is in effect at the time of such review; and

(B) determine on the basis of such review whether any such species should --

- (i) be removed from such list;
- (ii) be changed in status from an endangered species to a threatened species; or
- (iii) be changed in status from a threatened species to an endangered species.

Each determination under subparagraph (B) shall be made in accordance with the provisions of subsection (a) and (b).

(d) **PROTECTIVE REGULATIONS.** - Whenever any species is listed as a threatened species pursuant to subsection (c) of this section, the Secretary shall issue such regulations as he deems necessary and advisable to provide for the conservation of such species. The Secretary may by regulation prohibit with respect to any threatened species any act prohibited under section 9(a)(1), in the case of fish and wildlife, or section 9(a)(2), in the case of plants, with respect to endangered species; except that with respect to the taking of resident species of fish or wildlife, such regulations shall apply in any State which has entered into a cooperative agreement pursuant to section 6(a) of this Act only to the extent that such regulations have also been adopted by such State.

(e) **SIMILARITY OF APPEARANCE CASES.** - The Secretary may, by regulation, and to the extent he deems advisable, treat any species as an endangered species or threatened species even though it is not listed pursuant to section 4 of this Act if he finds that --

(A) such species so closely resembles in appearance, at the point in question, a species which has been listed pursuant to such section that enforcement personnel would have substantial difficulty in attempting to differentiate between the listed and unlisted species;

(B) the effect of this substantial difficulty is an additional threat to an endangered or threatened species; and

(C) such treatment of an unlisted species will substantially facilitate the enforcement and further the policy of this Act.

(f) **RECOVERY PLANS.** - The Secretary shall develop and implement plans (hereinafter in this subsection referred to as "recovery plans") for the conservation and survival of endangered species and threatened species listed pursuant to this section, unless he finds that such a plan will not promote the conservation of the species. The Secretary, in developing and implementing recovery plans, may procure the services of appropriate public and private agencies and institutions, and other qualified persons. Recovery teams appointed pursuant to this subsection shall not be subject to the Federal Advisory Committee Act.

(g) AGENCY GUIDELINES. - The Secretary shall establish, and publish in the Federal Register, agency guidelines to insure that the purposes of this section are achieved efficiently and effectively. Such guidelines shall include, but are not limited to--

(1) procedures, for recording the receipt and the disposition of petitions submitted under subsection (b) (3) of this section;

(2) Criteria for making the findings required under such subsection with respect to petitions;

(3) a ranking system to assist in the identification of species that should receive priority review for listing; and

(4) a system for developing and implementing, on a priority basis, recovery plans under subsection (f) of this section.

The Secretary shall provide to the public notice of, and opportunity to submit written comments on, any guidelines (including any amendment thereto) proposed to be established under this subsection.

APPENDIX V

THE PROPOSED LISTING OF THE
ILLINOIS MUD TURTLE1. Synopsis of proposed listing.

On 6 June 1977, the U.S. Fish and Wildlife Service (FWS) published a notice in the Federal Register that it was reviewing the status of 12 species of turtles, including the Illinois mud turtle (Kinosternon flavescens spooneri) (42 Fed. Reg. 28903-28904). In response to this notice, a number of biologists commented that the status of the Illinois mud turtle was precarious. FWS also conducted a review of the scientific literature and consulted persons familiar with the biology of the turtle. On 6 July 1978, FWS proposed that the Illinois mud turtle be listed as endangered and that critical habitat be designated (43 Fed. Reg. 29152-29154). Shortly after the proposed listing, Congress enacted the 1978 amendments to the Endangered Species Act (ESA). The 1978 amendments modified the criteria for designating critical habitat and, in particular, required that the economic impact of any designation be considered. Because of these revisions in criteria, FWS withdrew all proposed designations of critical habitat on 6 March 1979 (44 Fed. Reg. 70680-70682).

At the suggestion of representatives of Iowa-Illinois Gas and Electric Co., LGL Ecological Associates, and Monsanto, Inc., FWS proposed on 7 December 1979 that a revised area, slightly smaller than that originally proposed, be designated as critical habitat (at the Big Sand Mound in Iowa) (44 Fed. Reg. 70680-70682). Public meetings followed in which additional information on the biology of the turtle and economic effects of a critical habitat designation were submitted in support of FWS's proposal. No public hearings were requested. Nevertheless, no subsequent action was taken on the listing of the mud turtle, and on 6 July 1980 the proposal expired because it had not been completed within two years as required under Section 4 of ESA (16 U.S.C. § 4(f)(5)). Although FWS withdrew its proposed listing, they continue to consider the Illinois mud turtle as a candidate species for listing.

2. The FWS's decision to list the Illinois mud turtle as endangered was biologically sound.

The ESA requires FWS to list species on the "best" scientific and commercial data available" (§ 4(b)(1)(2)). The record and other data, as summarized below, demonstrate that the FWS proposal to list the Illinois mud turtle as an endangered species was justified under this criterion.

Prior to the notice in the Federal Register that FWS was reviewing the status of the Illinois mud turtle, a number of scientists had published concerns about the species' continued survival (Cooper 1975, 1977, Moll and Brown, 1976, Murphy and Corn 1977). Concurrent with its status review, FWS requested that Dr. Lauren Brown prepare a report summarizing the available information on the mud turtle. The proposal to list the turtle one year later, in 1978, was based justifiably on the status report prepared by Brown and Moll (1978), as well as on a number of other studies (e.g. Cooper 1975, Murphy and Corn 1977) and comments by state conservation officials and the public. The report by Brown and Moll (1978) represented the best biological evidence on the status of the turtle at the time of the proposed listing. Moreover, it was subject to peer review and was published in a reputable scientific series. Information on the distribution of the Illinois mud turtle presented by Brown and Moll (1978) and Morris (1978) indicated that there were only a few, small, widely scattered groups of turtles. The best estimates of the number at the time of FWS' proposed listing ranged from 650 (Brown and Moll 1978) to as many as 3,535 (Cooper 1975) for the largest single population at Big Sand Mound in Iowa.

From the time FWS withdrew its proposed designation of critical habitat in March, 1979, until the time it repropoed that designation in December, 1979, research supported by Monsanto Agricultural Products Co. through LGL Ecological Research Associates produced new information on the distribution and abundance of the turtle. In an intensive study of the Big Sand Mound population by LGL, Springer and Gallaway (1979, 1980) and Bickham and Gallaway (1980) estimated the average number of turtles to be 1,342, although estimates ranged from 88 to 9,411. FWS concluded that it was likely that there were less than 1,500 turtles at Big Sand Mound; Bickham and Gallaway (1980) settled on 1390.

Outside of the population of Illinois mud turtles at Big Sand Mound, which is by far the largest one known, few reliable estimates of population size are available. Bickham and Gallaway (1980) estimated that there were 100-117 turtles at Rose Pond in Missouri. Subsequent work by Kofron and Kangas (1981) in Clark County, Missouri may result in estimates of around 400 animals. No reliable estimates are available for any population in Illinois. Of 80 sites surveyed in that state only 37 turtles were found in 12 sites. Brown and Moll (1978) estimated that there were 10 turtles at Sand Ridge State Forest in Illinois.

FWS maintained that the above evidence produced by LGL researchers did not invalidate the proposed listing but rather supported it. And although FWS subsequently allowed its

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proposed listing to expire, we agree with a number of FWS biologists (as well as the Conservation Departments of Illinois, Iowa, and Missouri) that the best available scientific data supported listing the Illinois mud turtle as endangered. Consider these points:

- o Brown and Moll (1976) reported that the Illinois mud turtle was considered relatively common until the late 1960's.
- o Herpetologists familiar with the biology of the Illinois mud turtle and its habitat requirements believe that a drastic decline has occurred (P. W. Smith, Illinois Natural History Survey).
- o The principal habitat requirements of the Illinois mud turtle are sandy soils and a water source; both were characteristic of the sand prairie that was once widespread in west-central Illinois. That area is now one of the most extensively developed agricultural regions of the United States.
- o Bickham and Gallaway (1980) concluded that agricultural drainage of ephemeral ponds was a serious threat to mud turtles in Illinois.
- o Brown and Moll (1978) reported that several areas once inhabited by mud turtles had been destroyed due to ditching and plowing.
- o Eight of 12 sites inhabited by small groups of mud turtles in Illinois are located in intensively farmed areas that have been modified greatly by man's activities (Moll 1979). These and other small, scattered groups of turtles are less secure and are subject to extirpation.
- o Groups of turtles, such as the 10 individuals at Sand Ridge State Forest in Illinois, are likely too small to be considered genetically viable, reproducing populations.
- o Only two isolated populations were found that were potentially large and secure enough to survive and remain genetically viable (Big Sand Mound and Clark County, Missouri). 90% of all the known Illinois mud turtles exist in these two isolated populations.

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- o 60% of all the known Illinois mud turtles are located on 123 acres at Big Sand Mound.
- o In spite of the commendable efforts of Monsanto and Iowa-Illinois Gas and Electric, a number of serious impacts at Big Sand Mound threaten the largest extant population of Illinois mud turtles:

--Drainage of Muscatine Slough by the Army Corps of Engineers has removed an important water source for Spring Lake, the major body of water at Big Sand Mound.

--Groundwater pumping for agricultural use, the city of Muscatine, and Monsanto's plant also may be adversely affecting the water sources of Spring Lake (Morris 1978).

--Spring Lake now has been dry for the last two seasons; the above impacts in combination with less than normal precipitation are likely responsible.

--An exotic species of tree, the black locust (*Robinia pseudoacacia*), is spreading at Big Sand Mound and is a serious threat to the turtle because it is fast growing and displaces native vegetation suitable for nesting and overwintering.

- o The species is listed as endangered in every state in which it occurs.

In summary, there are only two isolated populations of the Illinois mud turtle that are known to be viable. Based on the impacts to these two populations and the severe threat of extirpation to the remaining scattered, small groups of turtles, we believe that FWS was justified in listing the Illinois mud turtle as endangered throughout all or a significant portion of its range.

3. The independent review by a panel of scientists was inconclusive with regard to the proposed listing.

Because of the controversy over the data and the interpretation of those data, an independent panel was selected to review the FWS listing proposal for the Illinois mud turtle. That panel was selected by FWS from a list of recognized scientists recommended by the National Academy of Sciences.

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Those opposed to the proposed listing of the Illinois mud turtle have quoted the findings of the panel out of context and have not accurately reflected the panel's position. The Panel Report does not address the question of whether FWS was justified in its proposal to list the turtle. The findings presented in the Panel Report are inconclusive in this regard.

For the reasons given below, we conclude from the Panel Report that its findings have been misrepresented and are at least consistent, if not conclusive with regard to listing.

First, although the panel did find that the analysis of literature by Brown and Moll (1978) was "weak in the adequacy of survey procedures and design," it concluded that the "general survey procedures employed [by FWS] to assess the distribution and population of the Illinois mud turtle were acceptable." Unquestionably, the listing process would benefit if FWS were able to conduct comprehensive field studies, such as those done by LGL Associates for Monsanto. Sufficient funds should be made available to FWS to conduct such studies where necessary as a complement to literature surveys and analyses.

Second, although Monsanto states that the "... Illinois mud turtle was found to be a separate population of the common yellow mud turtle ...," the Panel Report did not conclude that the Illinois mud turtle was not a distinct subspecies. The Report states that "[t]he Review Panel does not believe that enough evidence has been presented to invalidate the present taxonomic designation, Kinosternon flavescens spooneri. However, recent research by LGL indicates that the taxonomy of Kinosternon flavescens is more complex than previously understood."

Third, the panel found that the turtle was in need of protection. Their report states that (1) "[i]n view of the present rates of habitat destruction and the population status of the Illinois mud turtle, there is a need for protection of this subspecies, especially the populations in Illinois"; and (2) "[c]areful consideration of the most appropriate and effective strategies for protecting the Illinois mud turtle should be made at the local, state, and/or federal levels." It is significant that the panel included protection at the federal level as one of the possible strategies to ensure the continued survival of the Illinois mud turtle. Their conclusion clearly is consistent with listing the turtle as endangered.

Fourth, the panel expressed concern that the turtle's habitat was being degraded. They found that "[b]ecause land management and development are adversely affecting available habitat for the Illinois mud turtle, the number of habitats

capable of supporting populations of this species is decreasing in abundance, and some are declining in quality. Such land uses and practices may be causing a decline in the total population of the Illinois mud turtle."

Finally, the panel never stated that the Illinois mud turtle should not be listed. Allegations that this was a "precipitous listing" are inaccurate. FWS acted responsibly when it proposed to list the turtle. The best scientific and commercial data available supported the listing then and continue to support the listing today.

4. The controversy surrounding the proposed listing of the Illinois mud turtle is atypical and does not represent a final indictment of the listing process.

Approximately 10 to 15 percent of all the listings proposed by FWS have been withdrawn because public comment produces new information, or FWS otherwise learns of unpublished data. In these cases, the listing process is functioning exactly as Congress intended. Listing proposals should be expected to result occasionally in challenges by other federal agencies or private industries and individuals. If those challenges produce new biological information on the status of the species in question, then the listing process is well served.

Only a handful of proposed listings have been seriously contested. Of these, none have approached the magnitude of disagreement that has surrounded the proposed listing of the Illinois mud turtle.

5. Steps should be taken to minimize serious disagreements, but listings should remain biological decisions by FWS and the Secretary of Interior.

Questions of whether species should be listed as endangered or threatened are, and should remain, biological decisions. As such, those decisions are best made by agencies with the greatest amount of biological expertise, namely FWS and the National Marine Fisheries Service.

In our opinion, the independent review panel was not useful in resolving the serious disagreement over the proposal to list the Illinois mud turtle. Instead, we suggest a number of steps to prevent or resolve future controversies over listing proposals. First, as noted earlier, sufficient funds should be made available to FWS to conduct field investigations of candidate species where necessary as a complement to literature surveys and analyses.

Second, we support the amendment to Section 4 proposed by the Environmental Defense Fund, which would formalize input to the listing process by state agencies and scientific organizations.

Third, the Secretary of Interior should be encouraged to use his existing authority to hold legislative or adjunctive hearings as a means of resolving seriously contested listings.

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APPENDIX VI

States with
cooperative agreementsPersonnel lost due
to Section 6 cut

	<u>State agency</u>	<u>Contract</u>
Alaska	0	1
Arkansas	2	5
California	18	28
Colorado	21	0
Delaware	0	0
Florida	22	0
Georgia	5	10
Guam	1	0
Idaho	1	3
Illinois	0	0
Iowa	0	0
Kansas	0	0
Maine	0	0
Maryland	0	0
Massachusetts	0	0
Michigan	2	0
Minnesota	1	0
Missouri	1	0
Montana	2	0
Nebraska	0	0
Nevada	0	2
New Hampshire	0	0
New Jersey	2	0
New Mexico	0	0
New York	8	0
North Carolina	5	18
Ohio	0	0
Pennsylvania	0	0
Rhode Island	2	0
South Carolina	5	0
South Dakota	1	0
Tennessee	8	4
Utah	0	0
Virginia	0	0
Virgin Islands	4	0
Washington	4	7
Wisconsin	2	0
Wyoming	4	0
TOTALS	121	78
GRAND TOTAL		199

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	Total funds appropriated ESA 1974 - 1981	Grant funds appropriated Section 6	Section 6 grant funds allocated
1974	4,660,000	- 0 -	- 0 -
1975	5,606,000	- 0 -	- 0 -
1976	11,223,000	2,000,000	*
1977	13,330,000	4,000,000	1,568,400
1978	16,534,000	4,000,000	5,717,900**
1979	18,869,000	3,000,000	5,862,400**
1980	21,725,000	5,000,000	5,021,400**
1981	24,895,000	4,000,000	5,445,400**

* Due to the small amount allocated in 1976, 1976 and 1977 allocations combined.

** These figures represent inclusion of previous year's unspent funding carried over and reallocated.

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ENDANGERED SPECIES GRANTS
FEDERAL FUNDS ALLOCATED
(\$1,000's)

State	1977	1978	1979	1980	1981	Totals
Alaska	-	-	-	30.0	22.2	52.2
Arkansas	60.0	70.0	80.7	93.7	77.4	381.8
California	450.0	1,384.0	1,630.0	984.0	1,091.9	5,539.9
Colorado	100.0	1,418.0	881.5	550.0	477.8	3,427.3
Delaware	4.3	15.4	10.6	10.6	10.0	50.9
Florida	96.1	105.8	383.2	542.5	572.1	1,699.7
Georgia	-	160.0	397.8	162.2	155.7	875.7
Guam	-	-	-	-	60.0	60.0
Idaho	-	-	-	30.0	50.0	80.0
Illinois	-	-	-	19.8	34.4	54.2
Iowa	-	-	-	16.4	18.9	35.3
Kansas	-	-	-	7.5	15.3	22.8
Maine	10.0	10.0	-	40.0	57.7	117.7
Maryland	132.9	190.5	164.1	130.0	133.0	750.5
Massachusetts	-	-	-	25.0	30.0	55.0
Michigan	154.9	309.2	331.0	318.2	474.2	1,587.5
Minnesota	-	-	-	75.0	145.3	220.3
Missouri	45.0	148.5	75.1	77.4	37.7	383.7
Montana	-	-	-	30.0	42.0	72.0
Nebraska	-	23.8	27.7	41.9	41.6	135.0
Nevada	-	-	-	30.0	60.0	90.0
New Hampshire	-	-	-	25.0	25.0	50.0
New Jersey	20.0	737.1	58.1	50.0	80.6	945.8
New Mexico	-	25.7	25.7	12.9	11.1	75.4
New York	226.8	366.5	402.8	403.5	403.5	1,803.1
North Carolina	-	176.9	370.1	307.1	307.6	1,224.7
Ohio	-	-	-	60.0	30.0	90.0
Pennsylvania	-	178.7	178.7	148.0	70.0	575.4
Rhode Island	-	-	-	-	21.8	21.8
South Carolina	106.6	116.8	117.1	137.3	190.0	667.8
South Dakota	45.0	25.0	60.6	35.1	30.2	195.9
Tennessee	-	53.5	269.1	169.0	114.6	606.2
Utah	-	-	-	41.0	97.7	138.7
Virginia	29.2	37.1	67.5	30.0	60.6	224.4
Virgin Islands	-	-	-	30.0	43.3	73.3
Washington	73.0	84.1	155.7	172.0	184.5	669.3
Wisconsin	14.6	81.3	175.3	123.3	99.6	494.1
Wyoming	-	-	-	-	68.0	68.0
Totals	1,568.4	5,717.9	5,862.4	5,021.4	5,445.3	23,615.4

APPENDIX VII

TABLE 1

Average Consultation Time on All Opinions:
1979-1981

	<u>Total Time (Mo.)</u>			<u>Total No. Opinions</u>		
	<u>Jeopardy</u>	<u>Non-Jeopardy</u>	<u>Total</u>	<u>Jeopardy</u>	<u>Non-Jeopardy</u>	<u>Total</u>
1979	155	541	696	48	223	271
1980	157	568	725	49	222	271
1981	32	162	194	11	68	79
	Total 1,615				Total 621	

Average Time: 2.6 Mo./Opinion

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Table 2
SECTION 7 CONSULTATION TOTALS: SUMMARY

Totals for all Regions, including the Washington Office:

<u>FY</u>	<u>Informals.</u>	<u>Formals</u>	<u>Jeopardy Opinions</u>
1979	1585	968	70 (+20* no jeo., if recom. accepted)
1980	2374	707	55
1981	<u>3535</u>	<u>504</u>	<u>29</u>
Totals:	7,494	2,179	154 (+20*)

a. Regional totals:

<u>Region</u>	<u>FY</u>	<u>Informal</u>	<u>Formal</u>	<u>No Jeopardy</u>	<u>Jeopardy</u>
1	1979	101	149	76	28
	1980	506	96	70	15
	1981	1008	86	53	8
2	1979	327	84	83i	1
	1980	400	45	42	3
	1981	385	41	39	2
3	1979	378	63	55	4
	1980	175	34	32	2
	1981	230	22	20	1
4	1979	325	61	62	6
	1980	672	58	57	5
	1981	640	14	13	1
5	1979	117	4	1	2
	1980	152	4	1	0
	1981	461	3	5	0
6	1979	322	74	59	8
	1980	401	79	63	17
	1981	762	41	36	1
7	1979	15	5	3	2
	1980	68	4	3	1
	1981	49	3	1	2

b. Washington Office totals:

<u>FY</u>	<u>IntraServ</u>	<u>Formals</u> <u>InterAg</u>	<u>Permits*</u>	<u>Jeopardy Opinions</u> <u>IntraServ</u>	<u>InterAg</u>	<u>Permits</u>
1979	179	16	333 = 528	6	2	11 = 19
1980	163	12	212 = 387	5	1	6 = 12
1981	71	16	207 = 294	0	6	8 = 14

(*permits - consultation with Wildlife Permit Office: ESA Section 10)

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Table 3
Species for Which "Jeopardy" Was Found
More Than Once: 1979-1981

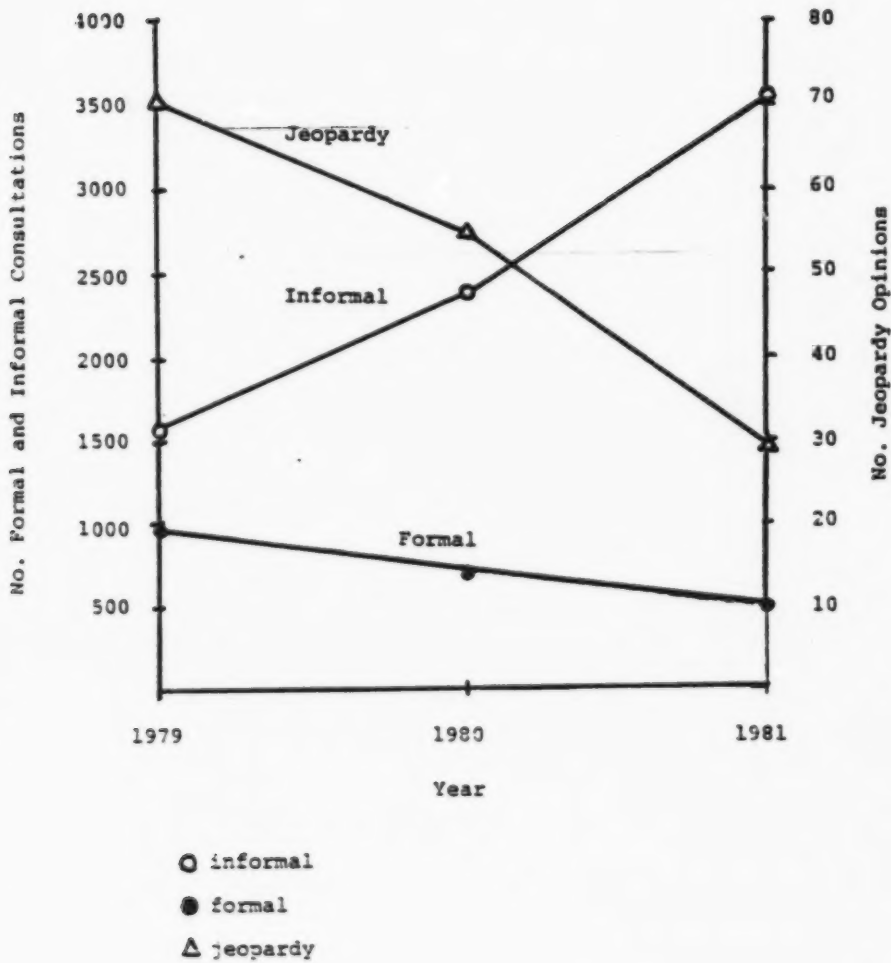
<u>SPECIES</u>	<u>NO. TIMES JEOPARDY FOUND</u>	<u>% OF TOTAL</u>
Bald eagle	16	12.3
American peregrine falcon	10	7.7
CA least tern	8	6.2
CO squawfish	7	5.4
Lahontan cutthroat trout	7	5.4
grizzly bear	6	4.6
Cui-ui	5	4.6
FL manatee	5	4.6
Humpback chub	5	4.6
San Diego mesa mint	5	4.6
Black footed ferret	4	3.1
Blunt-nosed leopard lizard	4	3.1
Gray wolf	4	3.1
Red-cockaded woodpecker	4	3.1
San Joaquin kit fox	4	3.1
Whooping crane	4	3.1
Attwater's greater prairie chicken	3	2.3
HI coot	3	2.3
Higgin's eye pearly mussel	3	2.3
HI stilt	3	2.3
IN bat	3	2.3
Southern sea otter	3	2.3
Boneytail chub	2	1.5
Loggerhead sea turtle	2	1.5
Marianas mallard	2	1.5
Pink mucket pearly mussel	2	1.5
Red wolf	2	1.5
Utan prairie dog	2	1.5
Wright fishhook cactus	2	1.5
Total - 29	Total 130	

Table 4Taxa for Which "Jeopardy" Opinions Were Issued: 1979-1981

<u>Taxon</u>	<u>No. Opinions</u>	<u>% of Total</u>
Plants	11	16
Insects	3	4
Clams	5	8
Fish	9	13
Amphibians	0	0
Reptiles	4	6
Birds	22	33
Mammals	<u>13</u>	19
Total	67	

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Figure 1
Trends in Informal, Formal, and Jeopardy
Opinions: 1979-1981



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APPENDIX VIII

TABLE I

WESTERN WATER RESOURCE PROJECTS RECEIVING BIOLOGICAL OPINIONS: 1979-1981

<u>PROJECT</u>	<u>LOCATION</u>	<u>SPECIES*</u>	<u>CONSULTATION TIME (DAYS)</u>	<u>OPINION+</u>
Windy Gap Diversion Dam	CO	BEG,WCR,APF, CSF,HBC,BTC	129**	2
Cheyenne Water Supply Project- Stage II	WY	CSF,HBC,BTC, BFF,APF,BEG	423**	2
Gallup-Navajo Indian Water Supply Project	NM,AZ	MVC,BEF,APF BEG,CSF	7	2
Kingsley Hydroelec- tric Project	NE	APF,BEG,WCR	81	2
Craig Station Third Unit	CO	CSF,HBC,BFF,BEG, VBC,MVC,SHC	126	3:CSF,HBC
Chikaskia Project	KA	APF,WCR,BEG	31	2
Jensen Unit, CUP	UT	CSF,HBC,BTC,BEG, APF,WCR	109	3:CSF,HBC,BTC
Rehabilitation of Lahontan Dam	NV	CUV,GCT,CBP,ACG	156**	2
Dallas Creek Project	CO	BEG,APF,BFF,HHC, CSF,HBC	14	3:CSF,HBC
Upper North Laramie Watershed Project	WY	WCR,APF,BFF,BEG	40	2
O'Neill Irrigation Unit	NE	BEG,WCR	320**	3:WCR

*see last page for abbreviation key

+ "1" promotes conservation; "2" not likely to jeopardize; "3" likely to jeopardize

(**indicates reinitiation)

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TABLE I (Cont'd)

<u>PROJECT</u>	<u>LOCATION</u>	<u>SPECIES</u>	<u>CONSULTATION TIME (DAYS)</u>	<u>OPINION</u>
San Juan-Chama Project	7	CSF,BEG	217	2
CA Wild and Scenic CA Rivers Proposal		MRC,VLB,BEG,APF	88	1,2
Panther Junction Rio Grande Village TX Developments		BBG	'11	2
Henshaw dam	CA	BEG	56	2
Greenback cutthroat Trout	CO	GCT	98	1
Disappointment Valley	CO	BEG	45	2
Pipeline, Grand Junction	CO	CSF,HBC,BTC	93	2
Kootenai River Hydroelectric Plant	MT	GBR	92	2
Fish barrier	AZ	AET	16	1
Delores Project	CO	CSF,BTC,HBC,	89	3
Ruth Reservoir	CA	BEG	93,69**	2
Burlington Dam Flood Control Project	ND	WCR,BEG,APF	60	2
Pollock-Herried Unit Irrigation Project	SD	WCR	89	7

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TABLE I (Cont'd)

<u>PROJECT</u>	<u>LOCATION</u>	<u>SPECIES</u>	<u>CONSULTATION TIME (DAYS)</u>	<u>OPINION</u>
Upper Little Black Watershed Projects	MO	GBT,CPM	19	2
Lower Little Black Watershed Project	MO,AR	GBT,PMH	20	2
White River Dam Project	UT	CSF,BEG,APF UBC,HBC,BTC	7*	2
Sweetwater Flood Control Channel	CA	CLT,LFC,SMB	7*	?
Colorado-Big Thompson Diversion Project	CO	BEG,WCR,APF,CSF BT~,HBC	53	2
Blackfoot Dam and Reservoir Modifi- cation Project	ID	BEG	225	2
Bumping Lake Enlargement	WA	BEG	120	2
Allen-Warner Valley Energy System	UT	WPN,DBP,SPC PSC,DST	288,210**	3:DBP,WPN
Closed Basin Diversion San Luis Valley Project	TX	BEG,WCR	91	2
Use Permit: Colorado River	CO	BEG,APF,HBC,CSF	25	2
Libby Additional Units and Reregula- tion Dam Project	MO	BEG	89	2

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TABLE I (Cont'd)

<u>PROJECT</u>	<u>LOCATION</u>	<u>SPECIES</u>	<u>CONSULTATION TIME (DAYS)</u>	<u>OPINION</u>
Missouri Basin Power Project- Grayrocks Dam and Reservoir	WY	BEG,WCR	403**	3*WCR
Moon Lake Project	UT	CSF,HBC,BTC, BEG,BPF,UBC	167,38,180**	2
Savory - Pothook Project	CO,WY	CSF,HBC	'never done	-
Bonneville M & I Systems, CUP	UT	APP,BEG	88	2
Grays Harbor Estuary Management Plan	WA	BEG,BRP,APP,ARF	109**	3:APP
Transplantation of CO Greenback cutthroat trout		GCT	59	1
Sale of public land UT along the Virgin River		WFH	106	2
Snyder-Winnebago Complex; Missouri IO River Recreation Lakes	IO	BEG	63	2
Green and Yampa CO Wild and Scenic River Study	CO	CSF,HBC,RBS,BTC, APP,BEG,BPF	45	1,2
Wildcat Reservoir	CO	BEG,WCR	455**	3:WCR
Grand Valley Irriga- tion Company Diver- sion Dam	CO	CSF,HBC	119**	2

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TABLE I (Cont'd)

<u>PROJECT</u>	<u>LOCATION</u>	<u>SPECIES</u>	<u>CONSULTATION TIME (DAYS)</u>	<u>OPINION</u>
Wildcat - San Pablo Creeks Water Resources	CA	CCR,SMH,BRP CLT	121	2
Pilot Channels: Middle Rio Grande Project	NM	BEG,APP,WCR	8	2
Juniata Reservoir Enlargement	CO	CSF	96	2
Truckee River Water Quality Standards	CA	LCT, CVU	86,104,125	2
Santa Ana River Flood Control Project	CA	CLT,LFC,SMB,CBP	76	1,2
Gregory County Pumped Storage Facility	SD	BEG,APP,BFP	22	2
Reno-Sparks Joint Water Pollution Control Plant	NV	CVU,LCT	?	3
Mohave Chub Manage- ment Plan	?	MCH	?	1
Hydroelectric Project No. 2821	OR	CWT	60	2
Emery Units: 3 and 4	UT	BEG	119	2
Potter Valley Proj- ect	CA	BEG	68	2

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TABLE I (Cont'd)

<u>PROJECT</u>	<u>LOCATION</u>	<u>SPECIES</u>	<u>CONSULTATION TIME (DAYS)</u>	<u>OPINION</u>
Dominguez Project	CO	BEG	95,100	2
Strawberry Aqueduct and Collection System	UT	CSP,HBC	75	3
3 Irrigation Projects on Indian Lands	NV	LCT,CUU	347	3
West Divide Proj- ect	CO	BTC,CSP,HBC	187**	3

TABLE I (Cont'd)

Key to Abbreviations

ACG	- Aleutian Canada goose
APF	- American peregrine falcon
ARF	- Arctic peregrine falcon
AZT	- Arizona trout
BBG	- Big Bend gambusia
BEG	- Bald eagle
BFF	- Black-footed ferret
BRP	- Brown pelican
BTC	- Bonytail chub
CBP	- California brown pelican
CLT	- California least tern
CPM	- Curtis' pearly mussel
CSF	- Colorado squawfish
CUU	- Cui ui
CWT	- Columbian white-tailed deer
DBP	- Dwarf bean poppy
DST	- Desert tortoise
GBR	- Grizzly bear
GBT	- Gray bat
GCT	- Greenback cutthroat trout
HBC	- Humpback chub
HHC	- Hedgehog cactus
LCT	- Lahontan cutthroat trout
LFC	- Light-footed clapper rail
MCH	- Mohave chut
MRC	- McDonald's rock cress
MVC	- Mesa Verde cactus
PMM	- Pink mucket pearly mussel

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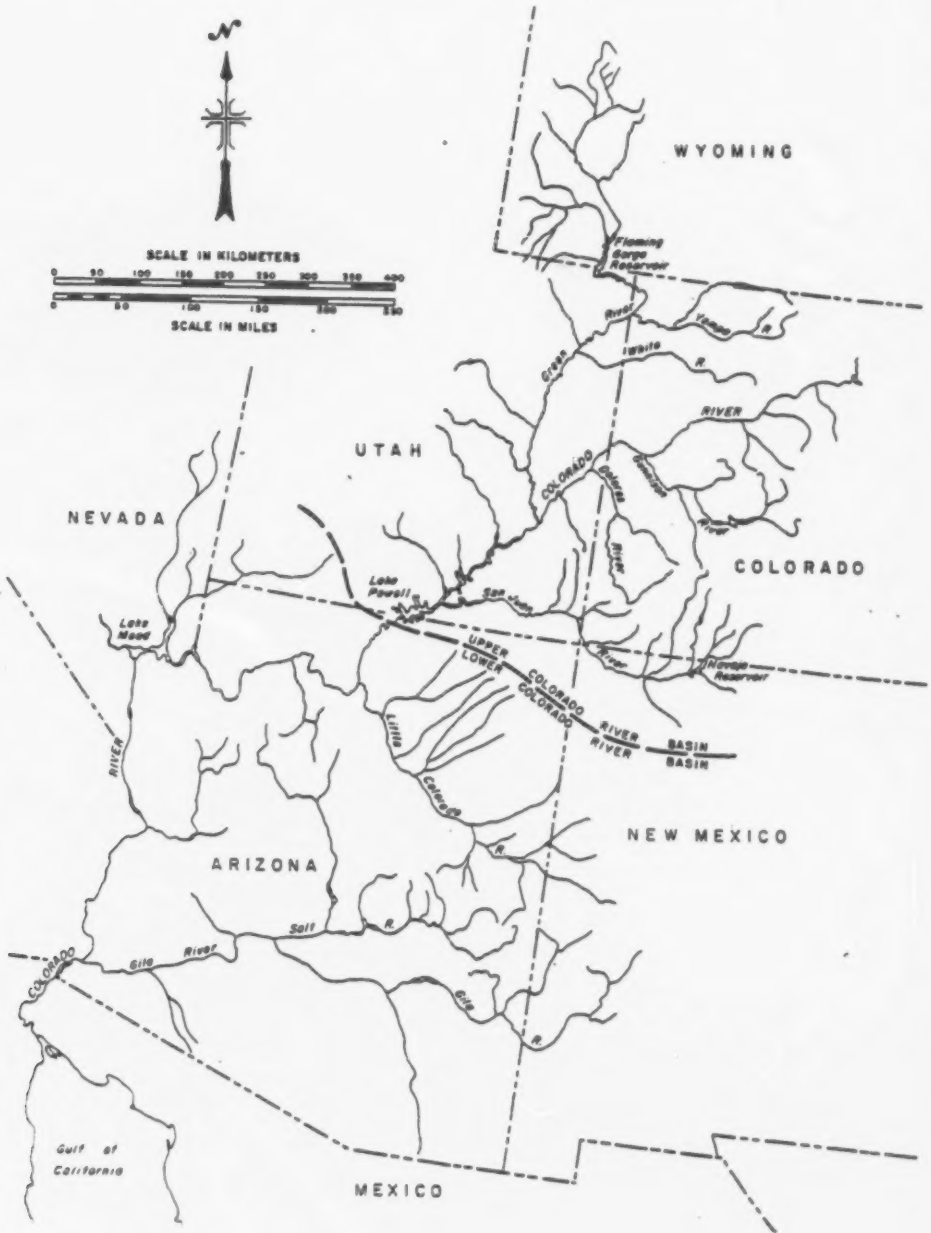
-2-

TABLE I (Cont'd)

PSC - Purple-spined hedgehog cactus
RBS - Razorback sucker
SMB - Salt marsh bird's beak
SHC - Spineless hedgehog cactus
SMH - Salt marsh harvest mouse
SPC - Silver pincushion cactus
UBC - Uinta basin cactus
VLB - Valley elderberry longhorn beetle
WCR - Whooping crane
WFN - Woundfin

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FIGURE I
LOCATION OF "CONTROVERSIAL" WESTERN WATER PROJECTS



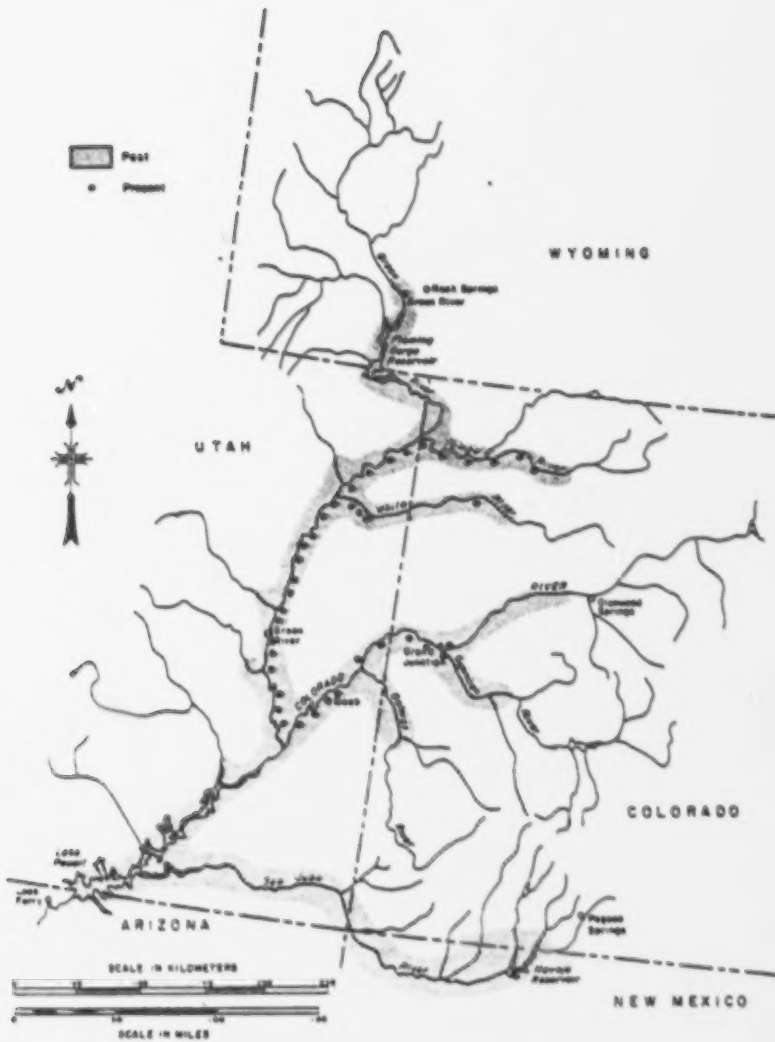
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TABLE II
 "CONTROVERSIAL" WESTERN WATER RESOURCE
 PROJECTS RECEIVING BIOLOGICAL OPINIONS

<u>PROJECT</u>	<u>STATUS</u>
Windy Gap Diversion Dam	Under construction; temporarily halted because of archeological site.
Cheyenne Water Supply Project-Stage II	Approved for construction; citizens of Cheyenne refused to fund the project.
Moon Lake Project	Under construction.
White River Dam	Approval pending
Dallas Creek Project	Under construction
Dolores Project	Under construction
Jensen Unit, CUP	Construction nearly complete
O'Neill Irrigation Unit	Approved for construction
Strawberry Aqueduct and Collection System	Under construction
Upalco Unit, CUP	Under construction
Craig Station Third Unit	Under construction
Grayrocks Dam and Reservoir	Under construction; nearing completion.
Savory-Pothook Project	Inactive status
Bonneville M & I System	Under construction
Wildcat Reservoir	Under litigation; applicant suit against COE
Colorado-Big Thompson Diversion-Project	Completed
Allen-Warner Valley Energy System	Withdrawn by utility; construction never initiated.
Kootenai River Hydroelectric Plant	Stalled by state and DOI suit concerning Indian religious fishing site.
West Divide Project	Withdrawn because of economics.

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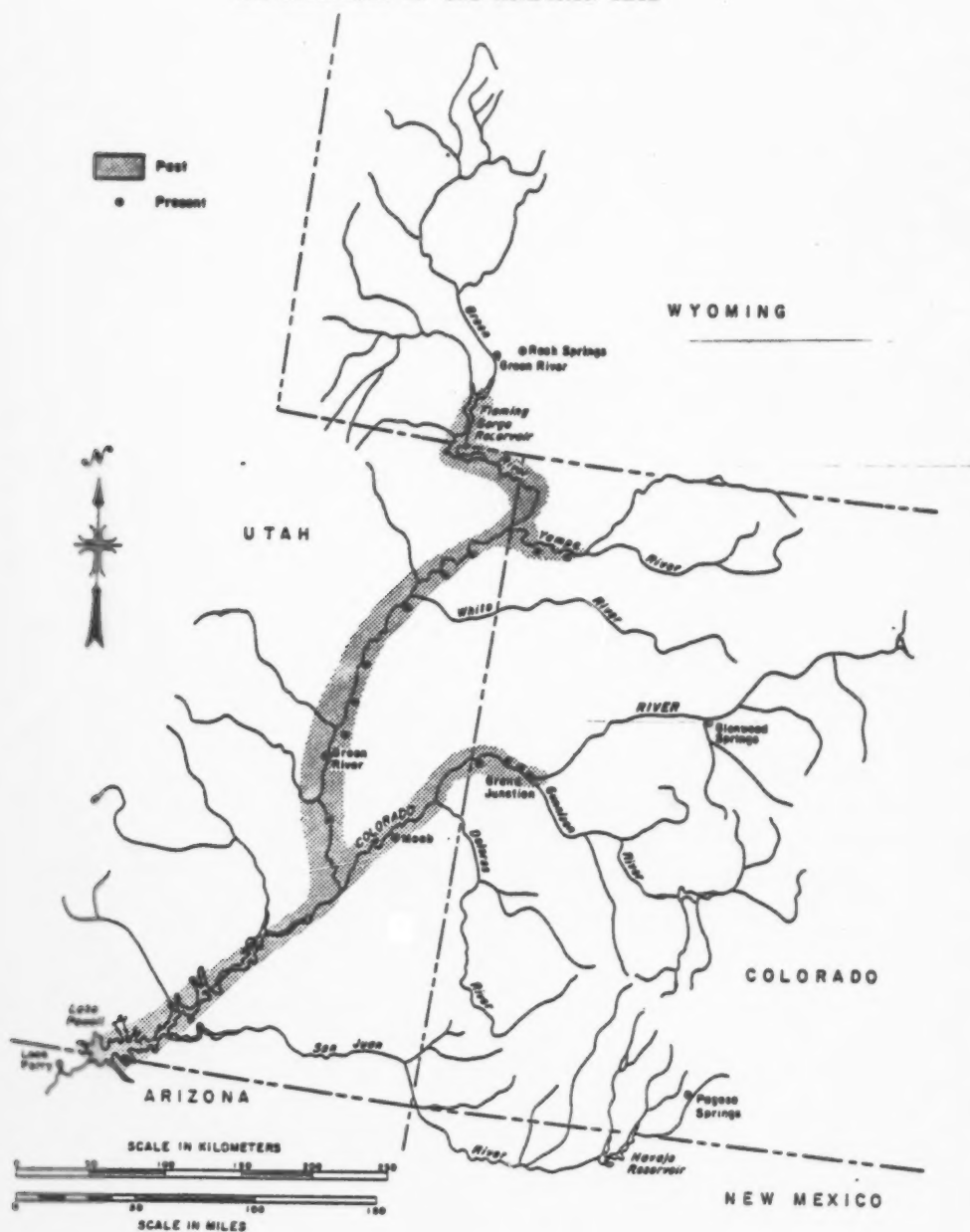
FIGURE II
DISTRIBUTION OF THE COLORADO SQUAWFISH



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FIGURE III

DISTRIBUTION OF THE HUMPBCK CHUB



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Mr. BREAUX. Thank you, Mr. Parenteau, and all of the members of this panel. We had this discussion, Mr. Roe, I guess by Mr. Savit, with regard to the problems with geophysical testing that they said the National Marine Fishery Service was really trying to make them prove a negative. Their geophysical testing would not or is not likely to disturb the bowhead whale.

I would like some discussion on that, because I think this committee was involved with changing the standards in section 7, to really address problems such as this. I think it used to be that such action may not jeopardize the existence of the species.

That was changed and section 7 now talks in terms of the fact that each Federal agency must insure that the action is not likely to jeopardize the continued existence of any endangered or threatened species as a result of the activity.

I would like some discussion on how NMFS interprets that language as to what your agencies, with regard to this situation, are authorized to do and instructed to do as a result of the act?

Mr. ROE. I think we have interpreted that language almost literally. In the case of bowhead whales, as Mr. Savit, I think quite correctly described when it happened up there, when we got into the business of OCS leasing and development in the North Slope, or the Beaufort Sea area, there are almost no data on the impacts of petroleum products, the associated activities, seismic work, exploration, transportation, vessel traffic, and so forth, on northern whales, particularly the bowhead whale, which probably is the second most endangered of the whales. The Atlantic right whale is probably first.

The language you are referring to says that an agency must insure that it is not likely to jeopardize. We were not sure in this case that any of the activities associated with development would not be likely to jeopardize the whale, given the size of the population.

However, we recognize that although the data base was limited, some of the activities would not appear to be detrimental to the whale.

Our first Beaufort Sea opinion did, in fact, suggest that certain activities could go on during the periods in which we knew the bowhead whale was not in the Beaufort Sea.

Last year, the situation Mr. Savit referred to came up in which there was vessel seismic activity, not hard ice or hard-water activities which are ongoing, right now, I believe.

The problem we have is that with no data on the impacts of the sound generating from those activities on whales, we thought it was in the best interest of the whale not to allow such activities to occur when the whale was in the area.

The problem was compounded last year because of a couple of things.

One, the ice conditions were such that the migration of the whales was delayed to some extent. And the whales stayed in the eastern Beaufort Sea for some period of time beyond which they normally do.

Since the whales were not appearing in an area where the seismic work was being conducted, we thought there was no reason to stop seismic activity at that time. We therefore believed that the

activity could go on, and, as Mr. Savit correctly described, aerial surveys were maintained.

Because there were no surveys made during the time when whales and the seismic work interfaced each other, we still don't know whether the activities associated with such software vessel-type activities will interfere with the whale.

Mr. BREAU. As I understand it, you stopped the activity once and the second time you permitted it because it was going to occur in an area where the whales were not in the vibration path?

Mr. ROE. The whales at that time of year are migrating from the northeastern Beaufort Sea offshore of the North Slope of Alaska, westward, and go around the coast of Alaska to the Bering Sea, where obviously they are escaping the ice.

Where the migration occurs, the timing is due to the advance of the polar ice. It is different than in the spring when the whales migrate up through narrow leads in the ices, where the ice separates.

Depending on the circumstances, the water expansion may be quite broad, it may be 50 to 100 miles from the land to the polar ice edge. In the case we are referring to here, the whales started their fall migration. The ice was, for some reason, well to the north. The whales stopped their migration, presumably continued to feed, and stayed in one area for some time.

We did not know whether the seismic work should be halted or allowed to continue. We believed it could continue because the whales were not in the area. The whales were to the east. As soon as they started to migrate to the west in a normal pattern, I think most of the seismic activities had pretty much ceased.

Mr. BREAU. In your estimate, how much would it cost National Marine Fisheries Service to assimilate enough hard data to be able to make findings that says seismic activity is not likely to jeopardize the bowhead whale?

How long would that take? And, can it be done?

Mr. ROE. I am not sure I can answer your question. I think that one of the things that would have to be done to assess such impacts would be to allow the whales to move through the area in which the seismic work was being done. Otherwise, you really can't tell what the effects are on an animal.

Mr. BREAU. But you can't permit it to be done because of that and you can't find out whether it disturbs them unless they are in the area of where it is being done.

Mr. ROE. You can allow scientific research to be done on whales. You could allow scientific research through a section 10 permit, which would allow harassment.

The problem with the impact of noise and other things is that we really don't know what the subtle effects are on whales. What may appear to be no impact at all may in fact have a long-lasting result on the loss of calves.

Some of the females are pregnant. We are concerned that fecundity in the bowhead is very, very low. These activities could have long-range subtle effects.

Mr. BREAU. You are telling us that this activity of man is not allowed, and I suspect it would be in an area where endangered species exist, but you don't know whether it has any effect on the endangered species?

Mr. ROE. That is right.

Mr. BREAU. Did you do a biological assessment on their application?

Mr. ROE. When the original consultation was conducted, yes.

Mr. BREAU. What did that consist of?

Mr. ROE. We had very little data to go on. Our assessment essentially said that the data base that we had indicated that there might be a harmful effect, which is the basis for the action we took last year.

Mr. BREAU. So you reached the conclusion based on a biological assessment that said it might have an effect?

Mr. ROE. Yes.

Mr. BREAU. Is that the same as likely to, under the act?

Mr. ROE. We interpreted it that way.

Mr. BREAU. Are you aware that Congress made, as I understand it, a specific change that took the language may and changed it to likely to?

Mr. ROE. Yes, I am.

Mr. BREAU. How do you rationalize that, by saying it is the same thing? If it is the same thing, would we not have left it like it was?

Mr. ROE. It was our opinion that with respect to the seismic activity, DOI could not insure that the impacts from such noise would not be likely to jeopardize the whale.

That is the way we interpreted it.

Mr. BREAU. Is that what you interpret the finding that you have to make?

Mr. ROE. Yes.

Mr. BREAU. You are saying you reached a conclusion in your testimony that it may effect and despite the fact that Congress changed the language to say it is not likely to, that you are really interpreting that to mean the same thing?

I think the reason—

Mr. ROE. I suppose I am.

Mr. BREAU. Mr. Savit, that must not give you a great deal of confidence?

Mr. SAVIT. No, Mr. Breau, it does not. I have the report to which Mr. Roe is alluding here in my hand. And I am not able to find any wording in the report that even suggests that these activities may affect the survival of the whale. They simply say that they do not feel they have enough information to say whether it will or will not have any effect.

I think rating this information with other published and readily-available information on hearing acuity, the behavior of similar whales and so on, one would say that the preponderance of the evidence is that this activity will have no effect on the whale.

Mr. BREAU. I think this discussion really indicates a problem area as far as interpretation of what Congress intended because, quite frankly, there could exist a situation just as we have talked about in this instance where we don't know.

It may, it may not. And you are making decisions based on guess-timates that do not have a great deal of scientific evidence to support either position, quite frankly.

Mr. Forsythe.

Mr. FORSYTHE. Thank you, Mr. Chairman and I thank the panel, for your testimony this afternoon.

Mr. ROE, in your testimony on the second page, I thought I found something that left me a little confused, in the top of the page, "except in one case reasonable and prudent alternatives were adopted and projects were implemented as modified."

Then, you wind up, "NMFS has not been involved in the consultation that prevented a proposed project from being implemented." What was the one case?

Mr. ROE. The Pittston refinery.

Mr. FORSYTHE. Then that following statement is not correct, is it? Or was there some other factor in the Pittston case?

Mr. ROE. There were other factors in Pittston. If I recall Pittston correctly, the biological opinion that we rendered to EPA was ignored. However the project was stopped because of other reasons after EPA moved forward with a permit; there were other actions in litigation.

The Endangered Species Act did not stop the project.

Mr. FORSYTHE. Then the connection between the one case and the consultation really wasn't the fact of the matter. It was other factors?

Mr. ROE. Yes, I am sorry I confused you on that one.

Mr. FORSYTHE. We have heard testimony here about the conflict between section 7 and section 9 on this matter of one says that after you have a no-jeopardy situation you can come along and still be liable under section 9.

What is your reaction to that? Is it a real problem?

Mr. ROE. I think it is a problem that could be real, but can be resolved without changing the act.

Mr. FORSYTHE. How would you resolve it without changing the act?

Mr. ROE. We can do this, I am convinced, with discretion on our part. I think the administration has that ability to use prosecutorial discretion in cases such as the one the gentlemen on the panel raised—Perhaps the short-nosed sturgeon is a good example of the problems arising when you give a no-jeopardy opinion and then run the risk of a taking.

If a taking occurs but prosecution would not further the purposes of the act, we might decline to prosecute such cases.

Mr. FORSYTHE. Well, I suspect so far as Mr. Cagnetta may be concerned, it isn't all that good a security, having once received a no-jeopardy opinion.

Mr. ROE. I would suspect it is not.

Mr. FORSYTHE. Dr. Cagnetta?

Mr. CAGNETTA. No, that is just our point. Agency action does not have the weight of law and we are still liable under courts' decisions and we really need something that is equal to the weight of court decisions and case law.

That is the change in the law itself, will only hold the weight, the weight we think is sufficient to eliminate that continued liability.

Mr. FORSYTHE. Dr. Tate, you mentioned in your testimony, the difference between the range for a species and critical habitat. Do

we have a situation there that does create more of a problem by kind of hedge-hopping and making range the critical habitat?

Mr. TATE. You can never completely separate the concept of range habitat in the intent of Congress as the law was put together. But a careful reading would show us that the probable intent was to include those biological and those physical and chemical elements that make up the ecology of the species inside of that area.

You may remember that I used the Houston toad as an example, just as you did earlier. Because, you see, inside of the confines of the city of Houston, it is entirely likely that those elements, those biological, chemical and physical elements, may not be present any longer. So if you draw a line around the city of Houston, you have done nothing except draw a line around the area where there used to be—this is a hypothetical example—where there possibly used to be what was necessary to keep that toad there.

Mr. FORSYTHE. It was the chairman that used that example, but I have also used it in previous hearings myself. Well, that seems to me that when you just use the range without bringing in rare species within that range factors, that then results in a critical habitat designation, that would not be the total range.

Am I reading this right?

Mr. TATE. If I could say again what you just said, the designation of a critical habitat which is nothing but a line drawn on a map, may or may not include what is essential to the species being there. Whether it includes it probably ought to be determined at the time the critical habitat is designated.

Mr. FORSYTHE. When the habitat is made?

Mr. TATE. That is right.

Mr. FORSYTHE. The range should be a part of the listing determination?

Mr. TATE. What I mean to say is when the critical habitat is designated it should include a line inside of which we can be fairly certain, as best as we know the ecology of that species, that it has what it takes to keep it there or allows us to do something to improve its lot in life.

Mr. FORSYTHE. Thank you.

Mr. Parenteau, I suspect this could be typographical. I hope it is. On page 36, I think I am reading it right, in your proposed amendment to improve the exemption process under 1(a)(2), you say this proposal reduces the maximum of 450 days under the current process to a maximum of 195 days, which includes 95 days for the submission of an exemption.

Then you later said, I think, 225 days being where you come out and I, in my rare limited math ability, can come out with 315, if the 90 days are in it.

Help me out.

Mr. PARENTEAU. My math isn't—that was one of my poorest subjects. I am excluding the initial 90-day period that the applicant has to file the application. Then I count the fifteen days that the Secretary has to certify, the 150 days the ALJ has to make his report to the committee and the other 60 days the committee has to deliberate.

That comes out to 225.

Mr. BREAUX. But in that is an additional 30 days before the ALJ really has the material mandated before him?

Mr. PARENTEAU. There could be as much—depending how quickly the applicant files, there could be an additional 90 days added on to that 225. You see, the—

Mr. FORSYTHE. All right, the 90 days. Once he tries to get the 30 days for the Secretary to submit to the ALJ—

Mr. PARENTEAU. Fifteen days is all we are giving the Secretary.

Mr. FORSYTHE. You give him 15 days to certify and to submit to the ALJ, correct?

Mr. PARENTEAU. That is correct. That is a ministerial function, we figure. So we did—

Mr. FORSYTHE. An additional 30 days for the Secretary to provide more information for the ALJ? Within that 150?

Mr. PARENTEAU. Yes. That is correct.

Mr. FORSYTHE. You could be reducing the ALJ time, is that correct?

Mr. PARENTEAU. That is correct. The two periods run concurrently.

Mr. FORSYTHE. I just wanted to make sure. Anything that could reduce that and do it reasonably, I think would contribute to the act. Thank you.

Mr. BREAUX. Mr. Sunia, any questions?

Mr. SUNIA. No, sir.

Mr. BREAUX. Mr. Hughes.

Mr. HUGHES. No questions.

Mr. BREAUX. I just got the tape.

You suggested a possible amendment that would help the habitat portion. How would that address the problems you see currently occurring?

Mr. TATE. The major problems come with the concept of critical habitat as an area in which actions cannot be taken. It goes back a long way in the creation of the Endangered Species Act when folks felt that we could designate a critical habitat for a species. At least, industry or other people who were proposing an action felt we could say, "There is an area we don't have to go into, there is an area that we know absolutely we are forbidden to be in."

Unfortunately, this interpretation of critical habitat continues with a good number of people, as in the Bastrop City Council procedures mentioned earlier. A number of people still consider that this is what critical habitat means. We are proposing for these other areas, favorable habitat, we suspect that those biological elements, those ecological elements that are important to the species, are probably there, but the species just doesn't happen to be there.

It would allow us to introduce or to manipulate an endangered species inside of its favorable habitat without violating the Endangered Species Act and possibly getting our project shut down because of that.

Mr. BREAUX. You have, I guess, less protection afforded a favorable habitat barrier?

Mr. TATE. In that area, the only population that exists is that being manipulated by introduction or other things. They are not essential in that area to the survival of the species, although they

contribute to the survival of the species, if we are allowed to continue those kinds of manipulations.

Mr. BREAU. Favorable habitat designation would be made at the same time as a critical habitat designation?

Mr. TATE. It could be, but more likely it would be upon discovery of the existence of the necessary ecological elements.

Mr. BREAU. What restrictions would you recommend which would govern in a favorable habitat area? Are you just designating it as favorable habitat, that is a nice area favorable to the species, but you can do what you want?

Mr. TATE. We would expect that we would have discovered the existence of those elements necessary for the survival of the species, if the species niche exists. What is necessary for the species to survive, the niche is there, but it happens not to be occupied by that animal.

Mr. BREAU. Why designate an area of favorable habitat if there is no species in danger in that area?

Mr. TATE. That is essential to the experimental management techniques that much of modern aware industrial concerns are trying to implement. They are trying to do things for the benefit of these species as a natural part of the process they are involved in, be it mining or logging. Within these areas of favorable habitat, industry would be allowed under the watchful eye of the appropriate agencies to participate in this kind of experimental management.

Mr. BREAU. You are familiar with the experimental populations. Are you are talking about something that would resemble that?

Mr. TATE. Yes, we are proposing the experimental populations concept as well, and this is essential to that.

Mr. BREAU. Dr. Cagnetta, you discussed a conflict that you see between section 7 and 9 of the act wherein if no jeopardy is made under section 7 and if in fact a taking occurs with activity that is permitted, that section 9 could still come into play and any violation of that section could occur. You are concerned about that?

Mr. CAGNETTA. Yes, that is correct.

Mr. BREAU. Suppose a no-jeopardy determination is made that this activity will not jeopardize the existence of an endangered species, and after activity begins, all hell breaks loose. Through some event that no one could have contemplated, endangered species are put in jeopardy or destroyed or what have you. Do you think that section 9 should come into play at that time?

Mr. CAGNETTA. No, because under those circumstances the deviation has come about beyond the original consultation. In other words, the original consultation finding had a basis which in effect was faulty. Under those conditions we would envision that the consultation would be reopened under regulations that are in place for reopening and rereviewing the biological assessment and taking whatever appropriate actions are necessary under section 7.

Mr. BREAU. You go back to section 7 if that would occur?

Mr. CAGNETTA. Go back to section 7, correct.

Mr. BREAU. Mr. Parentau, do you have any problems with the suggestion with regard to prior consultation between Federal agencies and private development groups as well as local governing

bodies and State bodies prior to the time the Federal permit activity is requested?

Mr. PARENTAU. Not only do I not have any problems, I have been trying to sell it for a number of years to the Fish and Wildlife Service without much success. It is not really their fault. When they proposed that sort of preapplication review in conjunction with their draft regulations under the Fish and Wildlife Coordination Act, they caught holy hell from industry groups for singling them out as a special consideration in the string of reviews that they had to go through. In short, I favor the idea of getting these considerations up front in the planning process as early as possible, but I think we face maybe an uphill struggle in doing that when there are sequential reviews involved in these major projects.

Mr. BREAUX. Do either of you other gentlemen have any thoughts about the prior consultation with the Federal agencies involved prior to the time a Federal permit is requested? Are any of you familiar with what we are talking about? Did you hear the discussion this morning?

Mr. CAGNETTA. Yes, I listened to this morning's meeting, and I think that is a very good idea. With nuclear power facilities or coal facilities we have been promoting regulatory actions for early site reviews, and this action contemplated for the endangered species review could be consolidated in these early site reviews prior to a construction permit application, so we think it is a good idea.

Mr. BREAUX. Mr. Savit, is your association and like-minded companies now able to do that seismic activity in the soundings during the last season?

Mr. SAVIT. We were able to operate except for 1 day that the planes could not fly. We did not know until the last minute that we would even be allowed to operate with the airplanes. That was a last-minute decision. We fear that in the coming season we may have many days in which the airplanes cannot fly if the same regulation applies. We would like to see statutory wording that makes very clear the question of the kind of evidence that is necessary to stop the operation, although as you have pointed out, it seems clear at the moment, but not clear to anybody but the victims.

Mr. BREAUX. The committee appreciates this panel's presentations. I think it has been helpful. You have pointed out a number of areas that we are going to be looking at carefully. We appreciate your being with us this afternoon. This panel will be excused.

Mr. BREAUX. We welcome the final panel. For the Department of Interior, Mr. Eugene Hester, Deputy Director; Bill Stevenson, Deputy Assistant Administrator for the National Marine Fisheries Service; and Mr. David Colson, Assistant Legal Adviser for the Oceans and International Environmental and Scientific Affairs.

We welcome you and look forward to your testimony. With that, we welcome the first witness, Mr. Hester, Deputy Director.

STATEMENTS OF EUGENE HESTER, DEPUTY DIRECTOR, U.S. FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR; WILLIAM STEVENSON, DEPUTY ASSISTANT ADMINISTRATOR, NATIONAL MARINE FISHERIES SERVICE, DEPARTMENT OF COMMERCE; AND DAVID COLSON, ASSISTANT LEGAL ADVISER, OCEANS AND INTERNATIONAL ENVIRONMENTAL AND SCIENTIFIC AFFAIRS, DEPARTMENT OF STATE, ACCOMPANIED BY SCOTT HAJOST AND GEORGE FURNESS

Dr. HESTER. Mr. Chairman, I appreciate the opportunity to appear before you today to present the Department's position concerning the reauthorization of the Endangered Species Act. Last June the Fish and Wildlife Service began collecting and reviewing data concerning the implementation of the act in order to prepare for the reauthorization of the program by Congress this year. This effort was expanded in August when Vice President Bush's task force identified the Endangered Species Act as one of the programs to be reviewed under the administration's regulatory reform effort. During this process we have been in contact with a broad range of groups, including conservation groups, industry, State fish and wildlife agencies, and private citizens. As a result of our analysis, we have identified several problem areas which need to be addressed.

We are, however, uncertain how to translate the identification of those problems into specific legislation. In fact, there may be methods other than legislative changes—such as policy or regulatory changes—to solve many of these problems.

On the basis of our review, however, there is one area in particular where there seems to be widespread agreement that change must be made—the section 7 exemption process. This process was designed to provide a procedure by which irresolvable conflicts between proposed Federal projects and endangered species could be resolved. There is clearly a need to streamline this process in order that a public interest determination can be made in a timely manner when an irresolvable conflict arises. In addition, we have had considerable contact with various State officials, through the International Association of Fish and Wildlife Agencies.

Recognizing the integral role played by the States in the Endangered Species Act, we have identified several State member recommendations that deserve thorough attention. One of these, for instance, concerns the need for establishing an "experimental population" category under the act in order to minimize State management problems when threatened or endangered species are introduced into areas outside their current range. As the Secretary has already indicated to you in his letter of February 8, 1982, the Assistant Secretary for Fish and Wildlife and Parks will be made available to assist you and your staff in drafting suggested improvements in the act.

With the exception of these recommendations, we do not at this time recommend further legislative changes, other than to request that the authorization for the act be extended for a year. During this time we will attempt to correct the identified problems through existing regulatory and administrative mechanisms before opening up the act to further major legislative modifications. We

feel this approach will provide the greatest assurance of improving implementation of the Endangered Species Act in the short term, while also allowing the time necessary to prepare recommendations for major changes which may be necessary to improve the act.

Mr. BREAUX. Bill Stevenson.

STATEMENT OF WILLIAM STEVENSON

Mr. STEVENSON. Thank you, Mr. Chairman and members of the subcommittee. Mr. Chairman, with your permission, I would like to summarize the testimony that was prepared and approved by OMB and submitted to the committee prior to the beginning of the hearing today, and just briefly review some of those activities that relate to the various sections which have been discussed throughout the day.

Mr. BREAUX. That is fine.

Mr. STEVENSON. I appreciate the opportunity to provide the subcommittee with a report of our activities conducted under the Endangered Species Act of 1973, Mr. Chairman.

The Department of Commerce is charged with carrying out this Nation's commitment to managing and conserving our living marine resources. This responsibility has been delegated to the National Oceanic and Atmospheric Administration.

Living marine resources are managed and conserved under authority of many laws, including the Fish and Wildlife Coordination Act, the Magnuson Fishery Conservation and Management Act; the Fur Seal Act; the Marine Mammal Protection Act; and the Endangered Species Act. Research on marine species is conducted in NOAA's 24 fishery laboratories, which are among some of the world's finest. The information collected at these laboratories is used to implement programs to conserve and manage fishery resources, marine mammals, and endangered species, and the habitat that is vital to these resources.

Under the Endangered Species Act NMFS has jurisdiction for 18 marine species listed as endangered or threatened. These include: eight whales; two seals; six sea turtles; and two fishes. Jurisdiction over sea turtles is shared with the Department of the Interior's Fish and Wildlife Service. One of the seals, the Caribbean monk seal, probably is extinct.

Several key provisions of the act establish our responsibilities and the processes we must follow to fulfill them. I would like to describe briefly our budget and specific research efforts, and then our domestic and international activities under these key provisions.

In each of these areas the National Marine Service carries out extensive research, but I specifically mention the bowhead whale, sea turtles, and Hawaiian monk seal research being carried out. Under section 4 of the act, particularly under protective regulations, the NMFS carries out programs to protect various listed marine species, and we have promulgated regulations including resuscitation procedures for incidentally taken threatened sea turtles, a temporary fishing restriction to protect sea turtles in the Port Canaveral, Fla., navigation channel, and harassment guide-

lines to protect humpback whales in waters surrounding the U.S. Hawaiian Islands.

Currently the National Marine Fisheries Service is examining additional methods to protect listed sea turtles, including the use of the travel-efficiency device. We are preparing a draft supplemental environmental impact statement on these various alternative measures which should be published within the next 6 weeks.

The National Marine Fisheries Service anticipates completing this year its first 5-year review of the listed species under its jurisdiction to determine whether the status of such species should in fact be changed. Section 7 of the act was amended in 1978 and 1979, but regulations implementing those amendments have not been promulgated. We worked with the Fish and Wildlife Service to develop draft regulations which were reviewed by other Federal agencies and modified several times to streamline the consultation process and to eliminate overly burdensome requirements. We believe the publication of final regulations this year should obviate the confusion and misunderstandings about the role and responsibilities of Federal agencies under section 7 of the act. In the interim, while the draft regulations were being reviewed, we and the Fish and Wildlife Service have used these draft regulations as operational guidelines.

I believe Mr. Roe has commented on the issue of consultation, and I need not duplicate the statements that he made. I would also make the same statement about the exemption process under the same section.

Under section 11(e), on page 14 of my testimony, under "Enforcement," endangered species enforcement activities include investigation and control of illegal taking, including killing, capturing, and harassing of protected species, as well as control over importing and exporting activities. Illegal shipments of parts and products of endangered and threatened species resulting in seizures, forfeitures, and fines have been the primary enforcement focus over the years. Increasing the public awareness of Federal controls on imports also has been emphasized in order to reduce the volume of seizures involving tourists unfamiliar with the act's strict prohibitions on imports.

Because very few resources are available for endangered species enforcement activities, we have had to make some crucial adjustments in order to achieve maximum utilization of those resources. In the past, our enforcement efforts were largely in response to specific complaints from the public. With NMFS-instituted training programs and experience, our enforcement agents have become more sophisticated in their approach to controlling activities prohibited by the act. In one case our agents cracked a multimillion-dollar sea turtle meat smuggling ring in southwest Texas. So far that case has resulted in a series of grand jury indictments and several guilty pleas. Operations involving large-scale trading and smuggling entail the cooperation of other Federal agencies, State and local authorities, as well as authorities of foreign governments. Such interagency and intergovernmental cooperation provides for both efficient use of enforcement resources and better protection of threatened and endangered species.

In summary, Mr. Chairman, I believe that the Endangered Species Act has worked well with respect to marine species. For that reason the Department of Commerce recommends the Endangered Species Act be reauthorized for a period of 2 years without amendments.

Mr. Chairman, that concludes my summary statement.

Mr. BREAUX. Thank you.

[The prepared statement of William Stevenson follows:]

PREPARED STATEMENT OF WILLIAM H. STEVENSON, DEPUTY ASSISTANT ADMINISTRATOR FOR FISHERIES, NATIONAL MARINE FISHERIES SERVICE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE

Mr. Chairman and members of the subcommittee, I am William Stevenson, Deputy Assistant Administrator for Fisheries, National Oceanic and Atmospheric Administration. I appreciate this opportunity to provide the subcommittee with a report of our activities conducted under the Endangered Species Act of 1973.

The Endangered Species Act represents the most comprehensive legislation for the preservation of endangered species that this country has ever enacted. Through the act the United States has provided strong international leadership in the conservation of fish, wildlife, and plants faced with extinction. Preserving such species and their ecosystems is important for maintaining genetic diversity, which provides living organisms with the capability to acclimate and adapt to a changing physical environment. Effective implementation of the Endangered Species Act must continue if we are to preserve the world's genetic heritage for future generations.

The Department of Commerce is charged with carrying out this Nation's commitment to managing and conserving our living marine resources. This responsibility has been delegated to the national Oceanic and Atmospheric Administration or NOAA. Living marine resources are managed and conserved under authority of many laws including: the Fish and Wildlife Coordination Act; the Magnuson Fishery Conservation and Management Act; the Fur Seal Act; the Marine Mammal Protection Act; and the Endangered Species Act. Research on marine species is conducted in NOAA's 24 fishery laboratories, which are among the world's finest. The information collected at these laboratories is used to implement programs to conserve and manage fishery resources, marine mammals and endangered species, and the habitat that is vital to these resources.

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Several key provisions of the act establish our responsibilities and the processes we must follow to fulfill them. I would like to describe briefly our budget and specific research efforts, and then our domestic and international activities under these key provisions.

BUDGET

During fiscal year 1981 we spent \$2,559,000 under the authority of the Endangered Species Act. We plan to spend \$2,347,000 in 1982. Activities in 1982 would include: program administration and support, \$396,000; enforcement, \$237,200; and sea turtle, pinniped, and cetacean research, \$1,714,000.

ENDANGERED SPECIES RESEARCH

Sea Turtles

The NMFS has developed a turtle excluder device or TED that can be attached to the most commonly used shrimp trawl to reduce the incidental catch of sea turtles by commercial fishermen. When used properly, the TED will reduce the incidental take of sea turtles by more than 95 percent without reducing the catch of shrimp. Preliminary tests also have shown the TED to be beneficial in reducing the undesirable by-catch of species such as jellyfish and horseshoe crabs and other large objects. They also indicate that TED may reduce fuel costs by reducing the drag on the net. In collaboration with the shrimp industry, environmental groups, and Sea Grant, we are in the process of transferring this technology to the industry. Recently, we demonstrated the TED to shrimpers along the southeast coast. Many shrimpers ex-

BEST DOCUMENT AVAILABLE

pressed an interest and several have begun to use TED. We anticipate that the TED will be adopted voluntarily by a majority of the shrimp fishermen, which will result in significant conservation of sea turtles.

Other sea turtle research includes studies to improve our estimates of populations of sea turtles in the Southeast. These studies involve surveying beaches for nests, examining the size and seasonal distributions of stranded sea turtles, reanalyzing historical data, and analyzing data gathered from tagging programs. Information from these programs will be used to determine population status which we can evaluate our recovery efforts.

We are conducting an experimental headstart program for the Kemp's or Atlantic ridley sea turtle. To enhance the survival of juveniles, each year about 2,000 hatchlings are removed from the wild and reared in a laboratory for 6 to 12 months. During the rearing period, data on behavior, feeding, and growth are gathered and examined. The turtles then are tagged and released at different locations in the Gulf of Mexico. This program, which started in 1978, is a joint effort involving Mexico, the State of Texas, the Department of the Interior, and NOAA. The limited information from recaptures indicates that some headstarted ridley turtles survived for at least 3 years.

NOAA also participates on an interagency task force convened by the U.S. Army Corps of Engineers to determine the occurrence and abundance of sea turtles in selected navigation channels in Florida. Data gathered during the program will be used to determine if dredging the channels will result in adverse impacts to sea turtles.

Hawaiian Monk Seal

We are concerned about the continued decline of the Hawaiian monk seal and have instituted a research program to determine the biology and ecology of this critically endangered species. Recent census data indicate that overall populations of monk seals decreased about 50 percent since the 1950's. Monk seal populations at Kure, Midway, and Pearl Islands and Hermes Reef declined 70 to 90 percent and only the populations at French Frigate Shoals and Necker Island increased during the same period.

Based upon our current understanding the most significant threats to the Hawaiian monk seal include disturbance and harassment by humans, commercial fishing, disease, shark predation, and man-made toxins. Ciguatoin, a naturally occurring poison also is suspected as being a significant threat to the Hawaiian monk seal and is thought to be the cause of death of about 50 Hawaiian monk seals on Laysan Island in 1978.

In 1981 our research on the Hawaiian monk seal population focused on:

(1) The Kure Atoll Pup Survival Study.—This study focuses on methods of enhancing pup survival at Kure Atoll, where recruitment of animals into the breeding population is near zero due to nearly 100 percent pup mortality;

(2) The Cooperative Aerial Survey with FWS.—Aerial survey techniques were developed for monk seal assessment taking. The project resulted in the only complete census of the Northwest Hawaiian Island population for fiscal year 1981;

(3) The Laysan Island Field Camp.—This study was initiated during the summer of 1981 to collect information concerning the reproductive biology of the Hawaiian monk seal; and

(4) The Flipper Tagging Study.—A pilot tagging study which focuses on causes of pup mortality and the age range yielding the highest mortality rates is being planned.

In 1982 we will be conducting additional research to provide more comprehensive assessments of the population and its status. We are particularly interested in continuing our research on pup survival on Kure Atoll in order to evaluate "headstarting" techniques as a method of arresting population decline. Our research and management activities will be guided by the recovery plan for Hawaiian Monk Seals which is being reviewed by the public in its draft form. Plan implementation is expected early this calendar year.

Bowhead Whale

Bowhead whale research plans include completing the analyses of census data gathered over the past few years to determine the reliability of population estimates, completing the studies on life history parameters (i.e., rates of mortality, growth, recruitment and/or reproduction) and designing models that will aid in assessing the status of the bowhead whale stock with respect to the Native subsistence take.

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INTERNATIONAL COOPERATION

Our international cooperation has involved reviewing and analyzing information from foreign countries concerning species resident in those countries or harvested by residents of those countries on the high seas; encouraging research on and conservation of endangered and threatened species; participating in the International Whaling Commission; and assisting the Department of the Interior in administering the Convention on the International Trade in Endangered Species of Wild Fauna and Flora [CITES], by providing information about marine species listed in the Appendices of CITES to the Management Authority and by serving as a member of the International Convention Advisory Commission [ICAC]. The inclusion of eight species of whales on the Endangered Species List provides a critical basis for U.S. policy in the International Whaling Commission.

We also are participating in and helping to finance a symposium on marine turtles to be held in Costa Rica in 1983 under the auspices of the Intergovernmental Oceanographic Commission Association for the Caribbean and Adjacent Regions [IO-CARIBE] on the status of the stocks of the western Atlantic (Gulf and Caribbean) population of sea turtles. From this symposium we expect to obtain the status and abundance of sea turtles throughout the western Atlantic.

SECTION 4

Listing

Since the act was amended in 1978 and 1979, the National Marine Fisheries Service, in conjunction with the Fish and Wildlife Service, Department of the Interior, promulgated regulations governing the listing of endangered and threatened wildlife and plants and the designation of critical habitat.

Since 1978, the National Marine Fisheries Service has listed certain endangered and threatened sea turtles and the totoaba (and endangered marine fish found in the Gulf of California). The Service also has reviewed several candidate species for possible listing under the act and designated critical habitat for the leatherback sea turtles in St. Croix, U.S. Virgin Islands.

Recovery Teams

Pursuant to section 4(g), the NMFS established Recovery Teams to prepare plans for recovering the listed sea turtles in the Atlantic Ocean, the Hawaiian monk seal, and the shortnose sturgeon. We anticipated these plans will be available in the near future.

Protective Regulations

To protect various listed marine species the NMFS has promulgated regulations including resuscitation procedures for incidentally taken threatened sea turtles, a temporary fishing restriction to protect sea turtles in the Port Canaveral, Florida Navigation Channel and harassment guidelines to protect humpback whales in waters surrounding the U.S. Hawaiian Islands.

Currently, the NMFS is examining additional methods of protect listed sea turtles including the use of the turtle excluder device. We are preparing a draft Supplemental Environmental Impact Statement on these various alternative measures which should be published in early 1982.

Review of Endangered Species List

The NMFS anticipates completing by fiscal year 1983 its first "5-year review" of the listed species under its jurisdiction to determine whether the status of such species should be changed.

SECTION 7

Section 7 Regulations

Section 7 of the act was amended in 1978 and 1979 but regulations implementing those amendments have not been promulgated. We worked with the Fish and Wildlife Service to develop draft regulations, which were reviewed by other Federal agencies and modified several times to streamline the consultation process and to eliminate overly burdensome requirements. We believe the publication of final regulations this year should obviate the confusion and misunderstandings about the role and responsibilities of Federal agencies under section 7 of the act. In the interim, while regulations have been drafted we and the Fish and Wildlife Service have used these drafts as operational guidelines.

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Consultations

The consultation requirements of section 7 were modified by amendments made to the act in 1978 and 1979. Section 7(a)(2) of the act requires all Federal agencies, in consultation with and with the assistance of the Secretary of the Interior or Commerce, to ensure that any action authorized, funded, or carried out by that agency is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat.

Since 1978, NMFS has received 1,076 requests for consultations pursuant to section 7. Most of these requests required only informal consultation, which does not involve the preparation of a biological opinion. There were 124 formal consultations of which 94 resulted in "no jeopardy" biological opinions, 12 concluded that there was not enough information to ensure no jeopardy to the listed species involved; and 18 biological opinions found "jeopardy." Reasonable and prudent alternatives were offered for all "insufficient information" and "jeopardy" opinions. Except for two cases, our reasonable and prudent alternatives were adopted and the projects were implemented as modified. Although the consultation process has resulted in modification of a number of projects, NMFS has not been involved in a consultation that prevented a proposed project from being implemented.

Our agency has worked hard to conduct meaningful consultations and to develop sound biological opinions that would help other Federal agencies to discharge their mandated responsibilities without violating the provisions of the Endangered Species Act. Indeed, the Circuit Court of Appeals for the District of Columbia recently upheld our Biological Opinion concerning oil and gas activities in the Beaufort Sea Outer Continental Shelf. This was one of the longest and most controversial consultations in which NMFS was involved.

We have worked with the Bureau of Land Management to streamline consultations on the Outer Continental Shelf Oil and Gas Leasing Program by conducting regional consultations. Regional consultations serve to provide an early warning of potential problems between listed species and oil and gas development on the outer continental shelf.

Exemption

The NMFS, in conjunction with the Fish and Wildlife Service, promulgated regulations governing the application procedures and criteria for obtaining an exemption from the provisions of sections 7 and 9 of the act from the Endangered Species Committee. We have little experience with the exemption process and cannot assess adequately whether the regulations or the process have worked well. We believe that the act's elaborate exemption process has encouraged Federal agencies to consult in good faith to resolve conflicts rather than seek an exemption.

SECTION 10

Permits

Permit issuance provides another means of fulfilling our broader marine conservation responsibilities under the Endangered Species Act and other major laws and international conventions. Permits involving endangered species provide an element of essential control over activities which could result in impacts on these species. As such, they are an integral part of our efforts to conserve listed species. Permits also require active followup and monitoring since on the average, each permit is modified at least once. About three-quarters of the permits issued are still in effect.

About 80 percent of our endangered species permits involve marine mammals, and the requirements of both the Endangered Species Act and the Marine Mammal Protection Act must be satisfied. In addition, we have joint responsibility with the Fish and Wildlife Service for issuing permits for sea turtles.

SECTION 11 (E)

Enforcement

Endangered species enforcement activities include investigation, and control of illegal taking, including killing, capturing, and harassing protected species, as well as control over importing and exporting activities. Illegal shipments of parts and products of endangered and threatened species resulting in seizures, forfeitures, and fines have been the primary enforcement focus over the years. Increasing the public awareness of Federal controls on imports also has been emphasized in order to reduce the volume of seizures involving tourists unfamiliar with the act's strict prohibitions on imports.

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Because very few resources are available for endangered species enforcement activities, we have had to make some crucial adjustments in order to achieve maximum utilization of those resources. In the past, our enforcement efforts were largely in response to specific complaints from the public. With NMFS instituted training programs and experience, our enforcement agents have become more sophisticated in their approach to controlling activities prohibited by the act. In one case our agents cracked a multi-million dollar sea turtle meat smuggling ring in southwest Texas. So far that case has resulted in a series of Grand Jury indictments and several guilty pleas. Operations involving large scale trading and smuggling entail the cooperation of other Federal agencies, State and local authorities, as well as authorities of foreign governments. Such interagency and intergovernmental cooperation provides for both efficient use of enforcement resources and better protection of threatened and endangered species.

In summary, Mr. Chairman, I believe that the Endangered Species Act has worked well with respect to marine species. For that reason the Department of Commerce recommends the Endangered Species Act be reauthorized for a period of 2 years without amendments.

Mr. Chairman, this concludes my formal statement. I thank the Subcommittee for the opportunity to appear here today and will be pleased to answer any questions that you may have.

Mr. BREAUX. Mr. David Colson, State Department.

STATEMENT OF DAVID COLSON

Mr. COLSON. Thank you, Mr. Chairman, members of the committee. I appreciate the opportunity to present the Department's views on the reauthorization of the Endangered Species Act. I am accompanied by Scott Hajost of my office and George Furness of the Bureau of Oceans and International Environmental and Scientific Affairs.

I would like to summarize my testimony, but ask that the full text of my prepared statement be inserted in the record.

The Department is before you today to firmly support reauthorization of the act without amendments which would erode our international leadership position in wildlife conservation or question our international obligations. In this connection there are three points that I would like to leave with the committee today. The first relates to the leadership position of the United States in wildlife conservation. If we wish to maintain that position we cannot be seen to be backing away from the Endangered Species Act. The United States inspired and led the negotiation of the Convention on International Trade in Endangered Species. We have effectively implemented CITES through our Endangered Species Act. We need to maintain our leadership role if we want to be an effective advocate both within and outside of CITES for wildlife conservation.

If we want our advocacy to have impact, we must avoid the charge of double standards. We cannot ask others to take firm action if we ourselves are not prepared to do likewise in similar situations. We must be prepared to take the steps necessary at home to underscore our commitment. Beyond this and possibly of more practical importance in the international arena, we need to maintain our leadership so that the United States can structure and lead the effort to strike the balance between conservationist and commercial or industrial interests. Without strong leadership from the United States, the balance one way or the other may well become skewed.

The second point that I would like to make today relates to the concern that the Department of State has about proposed amend-

ments to the act which would require the President to take an automatic reservation under CITES in certain instances. We have done a very quick review in the Department and we have not determined or found any other convention to which the United States is a party where there is legislation which requires the President to take a reservation in a specified instance.

Mr. Chairman, as noted in the prepared statement, there is a constitutional issue here which I will not go into. Setting that aside, there are good policy reasons against an automatic reservation proposal. As a matter of discretion, the President would normally reserve to a treaty when an amendment violated U.S. law, was impossible to implement, or when it substantially harmed U.S. interest without commensurate benefits. It is a discretionary matter, and should remain so. The decision to take a reservation should be taken after there is a full assessment of the U.S. interests at stake in the matter. We also should be cautious in subjecting CITES to regularized amendment processes. Doing so could turn what has been a very effective international institution into one that would be quite ineffective.

Mr. Chairman, in this connection I wish to underscore that the Department of State does not oppose in principle reservations to CITES, but it is the mandatory nature of the proposals that concerns us.

The third point that I would like to make concerns a proposed amendment relating to legislated no-detriment findings. We do not believe that this would be a good international precedent. If each CITES member introduced presumptive no-detriment findings, CITES' ability to react to changing situations would be seriously curtailed. Furthermore, the no-detriment standard is an international standard which is subject to an international process. As such it should be flexible. Under the convention it remains a matter of national obligation. While the State Department is quite prepared to see the States and local governments more fully involved in the Federal process relating to no-detriment findings, it remains a Federal responsibility under the international agreement to which we are a party. In that connection we do not believe that it should be delegated.

Mr. Chairman, I have appreciated the opportunity to summarize my prepared statement and to appear today. I stand ready to answer any questions you might have.

[The prepared statement of David Colson follows:]

PREPARED STATEMENT OF DAVID A. COLSON, ASSISTANT LEGAL ADVISER FOR OCEANS,
INTERNATIONAL ENVIRONMENTAL AND SCIENTIFIC AFFAIRS, DEPARTMENT OF STATE

Mr. Chairman and members of the committee, I am David A. Colson, Assistant Legal Adviser for Oceans, International Environmental and Scientific Affairs of the Legal Adviser's Office, Department of State. I appreciate the opportunity to present the Department's views on the foreign policy and international law aspects bearing upon the Committee's consideration of the reauthorization of the Endangered Species Act of 1973.

The United States is a leader in international conservation efforts. We have a long history in this respect. One of the most important examples of our leadership is the Convention on International Trade in Endangered Species of Wild Fauna and Flora. This Convention, known as CITES, was a U.S. initiative. It was encouraged by Congress in the Endangered Species Act of 1969 and it was concluded at a Plenary Conference held in Washington in 1973. The United States became a

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party to CITES in 1975, and now 76 member states are bound by its obligations. The United States, through the Endangered Species Act, has responsibly implemented its requirements and we have encouraged others to do likewise.

The purpose of CITES is to establish a mechanism for strictly controlling international trade in wildlife agreed to be in danger of, or threatened with, extinction. Effective implementation of the trade provisions is a means of preventing over-exploitation and facilitating survival of such species. It has been United States policy to encourage the widest possible membership in CITES and to make CITES as strong and effective as possible. In the United States, our obligations under CITES have been implemented through application of the Endangered Species Act and that is the reason why the Department is before you today.

The Department of State is firmly committed to the reauthorization of the Act as a means of carrying out our international obligations and furthering our interests. We would be concerned about amendments to the Act which would call into question our ability to carry out our obligations or which would detract from the leadership role we exercise.

Under Secretary of State James Buckley recently noted, (at the Strategy Conference on Biological Diversity convened last November by the State Department and seven other Federal agencies) that "extinction is an act of awesome finality." To ensure against this end, wildlife conservation receives very broad support from the American public, including a large number of public interest groups. Responsible commercial associations, such as those representing the fur, pet, and reptile products trades which testified before this Committee earlier, also are on record in their support for effective wildlife conservation.

To the extent there is an interest in the United States in preserving the earth's irreplaceable natural resources, we must be an effective advocate and we must legally ensure that we or others do not take actions to the detriment of our goal. CITES is of fundamental importance in this regard. It provides a regulatory mechanism for international trade in animals and plants and their parts and derivatives, permitting rational utilization of limited resources and placing commercial ventures on a sounder basis by providing clear rules for export and import. CITES, and the other international and bilateral wildlife treaties and agreements to which the United States is a party, have provided a vehicle for United States advocacy of wildlife conservation which has received almost universal acceptance. East-West divergencies have been nearly non-existent; when they have occurred, they have been based on non-ideological grounds. Between consumer and producer nations, the general goal of conservation of species has been overriding; and developing countries have looked to the United States for initiative, guidance and assistance. CITES is much more effective than bilateral agreements would be in this field.

Talk about our leadership role is not mere rhetoric. It is important for us to retain leadership, in order to be able to guide conservation along practical, balanced, scientific lines which are acceptable to conservationist and commercial interests alike, and which recognize the divisions between federal, state and local responsibilities.

In this connection, the Department would like to comment on three proposals for amendments to the Act which we believe would weaken our ability to pursue wildlife conservation internationally or would call into question our compliance with our treaty obligations under CITES.

First, we are aware of proposals that the Act be amended to require that the United States automatically take a reservation if, pursuant to CITES, a domestic species is added to Annex I or Annex II notwithstanding U.S. opposition. The effect of a reservation under CITES is that the reserving State is treated as a non-party to the Convention with respect to trade in the species concerned (Articles XXIII, XV, and XVI). We believe that an amendment to the Act mandating the taking of a reservation as proposed, is inappropriate and does not further our interests from a practical perspective.

Upon a quick review, we have been unable to identify any other treaty to which the United States is a Party upon which there has been imposed a legislatively required reservation in specified instances. There are a number of good reasons for this. There is a constitutional issue, of course. It falls to the President under the Constitution to conduct the foreign affairs of our nation. Legislatively required reservations could be seen as an infringement on the President's treaty-making power. Setting aside a constitutional law debate, the general need for flexibility in the conduct of our foreign relations dictates against a legislated automatic reservation procedure. Generally, the United States would not take a reservation to an international agreement except in those cases where, absent a reservation, the treaty would conflict with U.S. law, be impossible to implement, or would do substantial harm to

U.S. interests. In other words, the taking of a reservation to an international agreement should be treated seriously and should only be taken in extreme cases.

The United States in the past has discouraged others from taking reservations to CITES, and recently, we decided not to do so ourselves when the opportunity arose. Our policy has been dictated by a concern that in this 70-plus member Convention, the broad scale taking of reservations could soon become the death knell of this Convention's effectiveness. We believe that a U.S. policy of automatic reservations would have this effect, and are concerned with the precedent it would set. Mandatory reservations by other Parties to CITES could soon turn this very effective conservation convention into an ineffective international institution.

Moreover, a mandatory requirement to take reservations would be unduly inflexible. Each situation should be analyzed on a case-by-case basis because there are varying merits, foreign policy implications and factors that are in play in any given situation.

Mr. Chairman, I believe it is also important to note that mandatory reservations (by the United States on domestic species) would not really accomplish a change in the requirements for trade in those species with CITES parties who have not taken a similar reservation. Article X requires parties to CITES, before export, import or re-export, to obtain comparable documentation issued by competent authorities in non-party states. Thus, if the United States reserved to an Appendix I or II listing, but others did not, Article X of CITES would still require others to obtain "comparable documentation" from the United States authorities, which substantially conforms with the requirements of the Convention, e.g., the requirement of a "no detriment" finding. Therefore, in such a case a U.S. exporter, if exporting to a CITES country, is not really in a different situation than had the United States not taken a reservation. Similarly, there is no real benefit to a U.S. importer of a CITES listed species from a CITES party in the case of a U.S. reservation. As regards Appendix II species, CITES documents would still have to be obtained in the country of export; and while those documents might not be required for import into the United States under the Endangered Species Act or CITES, the Lacey Act remains applicable. As regards the import of an Appendix I species by a U.S. importer, the CITES party exporting would still have to be satisfied that an import permit had been granted substantially conforming with CITES requirements, that is, including a no detriment finding and that the import was not to be used primarily for commercial purposes.

In essence, Mr. Chairman, the legal structure of CITES is such that the taking of a reservation (by the United States to a listing of a foreign or domestic species) is little more than a political objection, at least as concerns parties to the Convention. The Department is aware that there have been unjustified listings in the past, but we generally believe that there are better ways of dealing with the problem other than automatic reservations. I wish to emphasize that the Department of State is not opposed to reservations per se, but before taking a reservation we should assess the full range of our interests and gauge our actions accordingly. We shall work diligently, in cooperation with the Department of Interior, in conveying our concerns in this regard to other CITES parties.

The second matter on which we wish to comment concerns proposals for amendments to the act providing for determination of no detriment under CITES. The no detriment standard is a legal standard under an international agreement. Generally, it is for the parties to an international agreement to mutually interpret it. We would not be bound by another country's unilateral interpretation and we cannot expect that others will be convinced of our unilateral interpretations. There is an element of give and take, and thus, the Department believes that a rigid legislative no detriment finding does not properly take into account the international process. It reduces our effectiveness as an advocate, making it difficult to oppose other countries who might in the future adopt similar presumptive approaches.

Moreover, we are concerned about any required automatic finding of no detriment by our scientific authority. The Convention defines the scientific and management authorities acting on behalf of a party as being national in character. We believe that CITES requires that the U.S. scientific authority, which acts for the United States under the Convention, must make an independent determination that an export of a species will not be detrimental to its survival. While we would fully support greater State involvement in such determinations, we believe that to conform with CITES, any formulation concerning no detriment should be sufficiently flexible, providing for the consideration of possible different criteria in specific cases, and subject to final determination by the national scientific authority established by §8A of the Act pursuant to the Convention.

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Mr. Chairman, the third proposal of concern to the Department of State is that the act be amended to delete the requirement for listing foreign species, endangered or threatened, under the act, leaving their listing solely to CITES. Provisions in the act now afford much broader protection than CITES. As such, their deletion from the act would not call into question our international legal obligations under CITES. However, we do believe that their removal from listing under the act would diminish the U.S. leadership role in wildlife conservation. If listing of foreign species is terminated under the act, section 8 programs providing for financial assistance to and cooperation with other countries could be severely hampered or even terminated. In addition, our ability to bring international attention to the plight of foreign species threatened with extinction, especially in developing countries where research and management may be inadequate due to limited resources, would be curtailed.

In closing, Mr. Chairman, I would like to note the considerable international interest in our Endangered Species Act. The act is a precedent that many other nations have since followed. On behalf of the Department of State, I respectfully urge that the act be reauthorized as it has in the past in a manner not conflicting with our treaty obligations or our foreign policy interests. Thank you.

Mr. BREAUX. Thank you, Mr. Colson, for your testimony.

In reviewing the various administration recommendations on legislation, I admit that at very best I am somewhat confused. The Interior Department is recommending a 1-year authorization. The Commerce Department is recommending a 2-year authorization. The Commerce Department is recommending no amendments. The Interior Department is recommending that we streamline section 7. I would like to begin by determining how the testimony from the various Departments cleared through OMB, because we have two entirely different recommendations.

Dr. HESTER. My statement was a statement of departmental position.

Mr. BREAUX. Was it cleared by OMB?

Dr. HESTER. It was not.

Mr. BREAUX. Was the Commerce Department's cleared by OMB?

Mr. STEVENSON. Yes, sir, Mr. Chairman. It was cleared by Mr. Frey, the Director for Legislative Reference at OMB.

Mr. BREAUX. Why was the Interior Department's not cleared? It was supposed to be a representation of official policy of the Department.

Dr. HESTER. It is a statement of the Department.

Mr. BREAUX. Are not these things normally cleared with OMB?

Dr. HESTER. Normally they are.

Mr. BREAUX. Why was it not in this case?

Dr. HESTER. I am not sure I can give you a complete answer to that.

Mr. BREAUX. You want to try half an answer?

Dr. HESTER. It was provided to OMB, but it was not cleared by OMB.

Mr. BREAUX. I do not understand, Mr. Hester, quite frankly, the two-page statement on probably one of the most important environmental acts that the Department of Interior and any agency in this Government has under its jurisdiction, and in your statement you recommend that there are some problem areas. The letter from Secretary Watt points out there seems to be universal agreement that a change must be made. And you point to the section 7 process. You point out in your testimony that the Interior Department is uncertain how to translate identification of those problems into specific legislation. Why?

Dr. HESTER. Because many of the things that have been identified as problems we believe can be resolved administratively through regulations, for example, and through other administrative actions, and so our proposal is to see how many of these we can solve administratively before amending the act.

Mr. BREAU. This Congress and this committee in 1978 and 1979 wrote changes into the law that the regulations have not yet even been written on. We have got a backlog on writing regulations with regard to legislation that some members of this committee voted on and are now not even in Congress, and still we have not seen it put into effect through regulations. How can we expect that all these problem areas are going to be solved by regulation? Do we have a legitimate right to expect that someone in Interior is going to resolve these problems when we have not published regulations since 1978?

Dr. HESTER. We expect to publish these regulations this year.

Mr. BREAU. How many years is that after the act was amended, 4 years?

Dr. HESTER. After the 1978 amendment almost 4 years, and after the 1979, about 3 years.

Mr. BREAU. Do you expect this committee to say we recognize universally that there are problems in the act that need attention and need correction and we are just supposed to bang the gavel and walk away and say we hope they will be solved by regulation? Is that a reasonable expectation for this committee to have?

Dr. HESTER. I think the Secretary anticipated that in some instances legislation would be required when he offered to you the assistance of our Assistant Secretary in trying to come to resolution of these problems.

Mr. BREAU. I have a great deal of respect for the Secretary, but it is going to be difficult for us to work with him if we do not know what he is going to recommend, is it not? We have no guidance from the administration. We recognize that there are problems, and stated that very clearly and very eloquently. We have looked at them for a year, but we do not know how to draft the recommendations. I mean, we have all been in this business a long time, and that is not too difficult. We have a legislative staff down there, do we not?

Dr. HESTER. Yes, we do.

Mr. BREAU. And they have been looking at specifically the Endangered Species Act for over a year, and still cannot make a legislative recommendation. Is there another reason other than inability to coordinate the problem into a line-by-line recommendation to the committee? Is there some other reason why we are not making a recommendation?

Dr. HESTER. One of trying to resolve these things administratively to the extent we can.

Mr. BREAU. We could agree that that is not likely to occur too quickly.

Dr. HESTER. I think some of the things envisioned here today have been resolved administratively already.

Mr. BREAU. OK, which ones?

Dr. HESTER. I think the one on the conflict between section 7 and section 9. Under section 7, when we carry out a consultation, the

determination of a biological opinion is based on hopefully a realistic determination as to what the pluses and minuses are, that is, what the risks are to a population. Those things would already be taken into consideration. For example, if there is an inherent danger as to certain individuals in a population, that should be taken into consideration at the time of the original section 7 consultation.

Mr. BREAU. Do we have a problem between the section 7 and section 9 that was addressed at committee hearings?

Dr. HESTER. I am sure there are problems at times. I think some of them are more apparent than they are real.

Mr. BREAU. Does the witness who testified that he is fearful that they could have a section 7 determination and no jeopardy being found, if a species is jeopardized by an action approved, are they not in danger of having a section 9 case brought against them?

Dr. HESTER. If the biological opinion should take into consideration the risk to the population when an individual fish or bird as opposed to the population is jeopardized.

Mr. BREAU. Looking at the broad picture, is it not a legitimate concern that a section 9 case could be brought against an industry or an individual, for that matter, that after a no-jeopardy finding under section 7 does in fact jeopardize a species, is not that individual subject to a section 9 case being made against them?

Dr. HESTER. My judgment, sir, is that if the subsequent does jeopardize the species, yes.

Mr. BREAU. That is not in fact being solved by regulations.

Dr. HESTER. But if it only jeopardized individuals in a population without jeopardizing the population per se, that is the distinction I was trying to make.

Mr. BREAU. That really has not been solved completely by regulations, has it?

Dr. HESTER. It has not been completely solved by regulation.

Mr. BREAU. Mr. Stevenson, let us talk about the issue that Mr. Savit brought up with regard to section 7 which is likely to jeopardize the bowhead whale. He points out that it is difficult to get information as to whether that activity would be likely to jeopardize the bowhead whale. I think that Mr. Roe indicated that NMFS had done a study and that the study indicated that such activity may jeopardize the whale. Also, he did not really see a lot of difference between the two studies. I think that is the essence of his testimony.

I think the language used to be that the agency would have to insure that the activity would not jeopardize the habitat of a species or the species itself. The language was changed to say that such activity is not likely to. There was a reason for that change. At least this committee thought that there was a reason for that change. Mr. Roe does not seem to follow that line of thinking. I would like to have your comment on that.

Mr. STEVENSON. Mr. Chairman, the statutory language, "is likely to impact a particular species," provided clarification and does in fact give a lot more latitude to the decisionmaker in the administration in trying to make a decision when it is unclear exactly what the scientific and technical information may be about the

issue. In this particular case, the information was particularly unclear. We did try to look at it from what was likely to affect and not look at it from the hard standpoint that it may affect. Under either criterion, we believe the decision that we made was consistent with the intent of the act.

Mr. BREAUX. The National Marine Fisheries Service does recognize that Congress made a change in that standard?

Mr. STEVENSON. Yes, sir.

Mr. BREAUX. I know it is difficult to determine whether something is likely to, but it was an attempt to try and make a change that was more easily followed and complied with by the various agencies. I think it is important that that difference be acknowledged by the various agencies.

Mr. STEVENSON. Yes, sir, we recognize that.

Mr. BREAUX. Mr. Colson, I know the State Department is not charged with biological determinations and assessments and the things which these other two gentlemen who are at the witness table with you are concerned about. The State Department is concerned with representing the United States internationally in various conferences, and I get the impression that what you are talking about concerns the legalistic items that determine how we make decisions. Not so much making the decisions from a biological standpoint; perhaps that is the role of the State Department with regard to these international conferences.

You talk about requiring what some have recommended to the committee of automatically taking a reservation to a CITES proposal that the United States would not agree with based on our biological assessment of a particular species. You do not agree with that, and say it is not a good recommendation. I would like to discuss more why State believes that we should not object automatically if in fact our scientific data on a species indicates that what the CITES convention or any international convention is doing is not proper, from a biological standpoint. Are international considerations so important that we have to give up our own best biological judgment in these areas?

Mr. COLSON. Mr. Chairman, I do not think I posed the problem quite the same way you posed the problem.

Mr. BREAUX. Mine was a little different.

Mr. COLSON. I do not think that the State Department would try to put in second place or third place our own biological or scientific assessments concerning endangerment, or whether a particular species were threatened, or to determine how the U.S. Government ought to react in such cases. Our only point is that we should in all cases look at the full range of issues. In one respect I am talking about a normal State Department concern about having some flexibility and not to be legislated into a box which indeed this committee might want us to get out of at some point.

Mr. BREAUX. Suppose we had an international conference and Country A makes a proposal that everybody, NMFS, the Interior Department, considers is improper and, from a biological standpoint does not make sense. On page 5 you say each situation should be analyzed on a case-by-case basis because there are varying merits, foreign policy implications and factors that are in play in a given situation. That does not mention anything about biology. Are

you telling this committee that in those circumstances, after they say "biologically it is a mess, it will never fly, you cannot prove it," you feel that the State Department should say there are other factors involved, foreign policy involved, so we are going to accept it and not pose a reservation to this improper proposal?

Mr. COLSON. No, sir, I do not think that we have that position.

Mr. BREAUX. What does that mean?

Mr. COLSON. If the U.S. Government or the responsible technical agencies of this Government, and if the concerned congressional interests of this Government were all of the view that a reservation should be taken, I am confident that one would be taken. The issue is whether we would legislate that in all instances this would be required or whether we would assess the issues and the President would then make a decision based on the full range of U.S. interests that might bear upon the matter.

Mr. BREAUX. How can we justify making an assessment that we should agree with a given country when they do not have any biological data to support their recommendation? In every instance where a country's proposal is based on no sound evidence to support that position, the United States would have to enter a reservation to that proposal.

Mr. COLSON. Well, certainly sir, that would be a much more legitimate way of approaching the problem under CITES than would be one where anytime the United States was simply in opposition to a matter that we would enter a reservation. CITES allows us 90 days following the meeting to consider whether or not the United States as a matter of law wishes to enter a reservation. It seems to me that we should take that time to fully assess the full scope of our interests. It is clear that if the matter was voted and approved in CITES, two-thirds of the member States thought that there was some justification for it. The United States ought to at least consider what the full range of U.S. interests might be in that particular case before we enter a reservation.

Mr. BREAUX. What role did the State Department play on the psittacine bird proposal, which I understand the Interior Department in fact opposed?

Mr. COLSON. We of course were consulted throughout that process.

Mr. BREAUX. Did you recommend any reservation or against a reservation?

Mr. COLSON. We recommended against a reservation.

Mr. BREAUX. On what basis?

Mr. COLSON. We did not feel that there was any substantial harm to U.S. interests in that case.

Mr. BREAUX. Did you discuss that with industry to come to that conclusion, or who in the State Department tried to find out—

Mr. COLSON. I cannot answer specifically, but I would be happy to—

Mr. BREAUX. Did you talk to any of the bird associations, that you are aware of?

Mr. COLSON. It is my understanding, Mr. Chairman, that we did have consultations with the pet industry and several other public interest groups. We were aware of their positions, and we were not

aware that anyone was strongly proposing that the United States take a reservation.

Mr. BREAU. Contrary to the testimony that we have had before the committee by representatives of the industry, are you telling us now that industry supported the United States not taking a reservation?

Mr. COLSON. I am saying that we were not aware that industry was advocating that we take a reservation.

Mr. BREAU. You have just cited to the committee an example. We have the agency in charge of carrying out the act from the biological standpoint, which I guess, Mr. Hester, would be Interior with regard to psitticine birds?

Dr. HESTER. It would.

Mr. BREAU. Recommending that we take a reservation. On the other hand, we have the State Department, which I do not think has a lot of bird experts, recommending that we not. You are telling me that that recommendation is based not on foreign policy indications, but because you did an assessment of the industry which you felt indicated to you it might not be hurt?

Mr. COLSON. No, sir, Mr. Chairman. We were primarily concerned that this was a listing on appendix 2. The exporting countries were substantially in favor of this listing.

Mr. BREAU. Which countries?

Mr. COLSON. The countries that export these particular bird. The United States is not an exporting country. As I understand it, there was only one of the exporting countries that was concerned about it, and that was Chile. Therefore there was, frankly, an issue here of whether the United States should reserve to a matter where the predominant interest, which was clearly the exporting countries' interest, was to see these species listed on appendix 2 of CITES.

Mr. BREAU. That is despite the fact that your coequal branch as far as entering into this picture, Interior, said that does not make any sense?

Mr. COLSON. I am not sure they said it does not make any sense. It was acknowledged that there was not the firm scientific basis for this listing that we would normally have liked to have.

Mr. BREAU. Mr. Hester, what was Interior's position?

Dr. HESTER. We did not recommend that a reservation be taken.

Mr. BREAU. Why not?

Dr. HESTER. We recognized some problems, but we did not feel that taking a reservation was required.

Mr. BREAU. How improper does a foreign government's recommendation have to be before we say that is enough, we are not going to accept that? With the bobcat, everyone who has sat at this table or any other table admits that there is no evidence submitted that justifies that proposal, and yet Interior is not recommending a reservation. State Department, if you recommended one, would recommend that they overrule that and not take a reservation. What standards are we going to use to say we are not going to accept that because you do not have any proof? What has to occur?

Do you see the point I am driving at? How improper does a recommendation by Timbuktu country have to be before someone in Interior or State says that does not make sense, we are not going to

recommend that we sign it? In fact we are going to take a reservation. A reservation is not a declaration of getting out of the convention. How improper does it have to be. Have we ever taken a reservation on the CITES convention?

Mr. COLSON. I do not believe so. We have not taken a reservation to CITES. I would note, Mr. Chairman, that it seems that the assessment of U.S. interests that I am talking about would be one where the balance in this particular case might have been substantially switched if the United States had been an exporting country and if our interest had been substantially impacted.

Mr. BREAUX. We are an importing country. Is it not the same whether you are exporting or importing them?

Mr. COLSON. I am not sure. The Department of Justice did not support a reservation in this case.

Mr. BREAUX. How are they involved?

Mr. COLSON. We are talking about the application of U.S. law, and we are talking about what laws will be applicable to U.S. citizens which seek to import these species into the United States. It seems rather clear that in this case this would still be a binding commitment on the part of the CITES governments that had not taken a reservation to it, which were the exporting countries.

Mr. BREAUX. All of them?

Mr. COLSON. Yes, sir, all of them.

Mr. BREAUX. Chile also?

Mr. COLSON. That is my understanding. But an exporter then would have had to obtain the proper CITES documentations from that country before it could export to the United States. If a U.S. citizen went to that country to obtain these specimens to export to the United States and did not obtain the CITES documents in accordance with the law of that country, he could have Lacey Act problems. This was pointed out in the Justice Department memorandum that was submitted during that time.

Mr. BREAUX. I am not sure that is a reason for us not to take a reservation. We are saying make it illegal here as well as over there.

Mr. COLSON. We voted against this particular matter during the course of the conference of the parties. We tried to stop it. We were not successful. The question was whether we would take a reservation once the conference was over, and we decided after looking at the full scope of our interests in that case that it was not in our interest to do that.

Mr. BREAUX. Mr. Forsythe.

Mr. FORSYTHE. Thank you, Mr. Chairman. And I thank the panel for their statements.

Mr. Hester, I understand that the Fish and Wildlife Service did prepare a position paper containing recommendations regarding possible amendments to the act. Would you please provide that specific document to the subcommittee?

Dr. HESTER. The Secretary advised that Mr. Arnett's office would be available to work with you. I would like to provide it through his office.

Mr. FORSYTHE. You will provide the document to Mr. Arnett's office?

Dr. HESTER. We will provide it through his office.

Mr. FORSYTHE. You will provide the document?

Dr. HESTER. Yes, sir.

Mr. FORSYTHE. Thank you.

[The information follows:]



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

APR 30 1982

Honorable Edward Forsythe
Ranking Minority Member
Subcommittee on Fisheries and Wildlife
Conservation and the Environment
House Committee on Merchant Marine
and Fisheries
Washington, D.C. 20515

Dear Congressman Forsythe:

During the March 8 oversight hearings held by the Subcommittee on the Endangered Species Act, you requested that Dr. Hester submit to the Subcommittee a copy of the recommendations made by the Fish and Wildlife Service to the Secretary concerning the Act. Dr. Hester indicated that he would respond to your request through my office.

The Service did not submit actual recommendations to the Secretary. Rather, they identified issues that were raised by the public during the Agency's review of the Act and prepared a detailed analysis of each of these. This material included an array of options for dealing with each issue, ranging from no action, to administrative change, to legislative change. I am submitting these issue papers in response to your request.

Both the Secretary and I look forward to working closely with you in your deliberations on the Act. I am hopeful that we can arrive at an agreement which is mutually acceptable to both the Administration and the Congress.

Sincerely,

(Sgd) G. Ray Arnett

G. Ray Arnett
Assistant Secretary for Fish
and Wildlife and Parks

Enclosures

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Issue Papers Requested of Dr. Eugene Hester by Hon. Edwin Forsythe

Revised 12/27/81

Issue: What should be the role of economic considerations during the listing process?

Discussion:

Economics presently enters listing through (1) the requirements of the Act itself which necessitate a formal economic analysis of a proposed critical habitat, and (2) the requirements of the "Determination of the Effects of Rules" to comply with E.O. 12291, the Regulatory Flexibility Act and the Paperwork Reduction Act.

For all species an analysis is made of the possible economic effect on a substantial number of small entities, the significant national or regional impacts, the significant impacts on State or local governments, the significance of new information collection, the major conflicts with other Federal programs, the significant impacts upon an industry, and the possible adverse effects upon competition, employment, investment, productivity, innovation, and the ability of domestic enterprise to compete with foreign-based enterprises.

For each species listed with critical habitat, an additional in-depth analysis is made to determine the effect which possible future Section 7(a) compliance might have upon any Federal permits, grants, or funding presently taking place or expected in the area specifically defined by the critical habitat. The impact of this effect upon the local landowners, the surrounding economy, the region, and the nation is described. This information is included in the Proposal to List as a preliminary analysis is revised and incorporated into the Final Listing Package as the Final Economic analysis.

The Secretary is not allowed to evaluate listing on economic grounds; biology is presently the only criterion for listing. Presently, economics can be used by the Secretary to evaluate and determine critical habitat size.

Comments Received:

The comments basically concerned the existence, extent, timing, and uses of economic analysis. The private sector is highly concerned about matters which they feel may affect their livelihood, economic status, and present and future control of resources. They are concerned about the possible restrictions listing might place upon the energy, transportation, recreation, and mineral development of the Nation. Other commenters are concerned that the existence of an economic analysis tends to prevent listing or to change the priority in which species are listed. Some commenters are concerned that the delineation of critical habitat is the sole cause for economic analysis.

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Options/Evaluation:

- A. Continuation of the status quo. An initial economic analysis based on currently existing information is done of all listings for the "Determination of Effects." Depending on the results of this analysis, a more detailed economic analysis may be done to comply with E.O. 12291, and the Regulatory Flexibility Act. In all cases where a critical habitat is declared, a detailed economic analysis is done. Economics is considered by the Secretary during the evaluation of the size of critical habitat but is not used as an evaluation of listing. (Status quo)

Pro:

1. Avoids devoting additional resources to conducting analyses which depend on speculations about potential conflicts.
2. Retains listing as a biological decision, reserving trade-off decisions until conflicts arise.
3. Less expensive than options B and D.
4. Economic analysis serves an informational purpose.

Con:

1. Devotes resources to data collection and analysis not utilized in the listing decision.
2. May delay some economic development.

- B. Combine all presently required economic analysis into one document. Request a statutory amendment which would incorporate the requirements of E.O. 12291 and the ESA Section 4(b)4 Critical Habitat economic analysis and would replace them with a new economic analysis to be done on each listing (presently only required for critical habitat). A draft of this document would be prepared in conjunction with the proposed listing package and would solicit and gather all economic data expected to be relevant in addition to all currently existing information. The final economic analysis would summarize all data gathered and accompany the final listing package. This document would not be used as a criterion for listing. Economics could then be considered during the exemption process. (Statutory change)

Pro:

1. Serves an informational purpose. (Better overview than A.)
2. Avoids devoting additional resources to conducting analyses which depend on speculation about potential conflicts.

3. Retains listing as a biological decision, reserving trade-off decisions until conflicts arise.

Con:

1. More costly than option A, and results in a document of limited value.
 2. Devotes resources to data collection and analysis not utilized in the listing decision.
 3. May delay some economic development.
- C. Amend the standard for listing, eliminating economic analysis at the time of listing entirely. (Statutory change)

Pro:

1. Would speed the listing process.
2. Avoids devoting resources to data collection and analysis not utilized in the listing decision.
3. Would remove any bias against listing which may currently be generated within the Department due to economic data.
4. Avoids devoting additional resources to conducting analyses which depend on speculation about potential conflicts.
5. Retains listing as a biological decision, reserving trade-off decisions until conflicts arise.

Con:

1. Public would not have the benefit of any economic information.
 2. May delay some economic development.
- D. Address economic considerations at the time of listing. The Secretary would have the discretion to consider the results of the economic analyses currently conducted during listing, along with the biological analysis, as a criterion for listing. The economic aspects of a proposed Federal action could also be considered during consultation and an exemption process could continue to be available. (Statutory Change)

Pro:

1. Economic considerations would be addressed at the earliest stage.
2. Would reduce number of conflicts, and may expedite resolution of conflicts. May avoid some economic costs.

3. In those instances where exemptions would have been granted, avoids delays of economic development.

Con:

1. Makes the listing process more complicated, expensive, and lengthy.
2. Would reduce protection based on speculation about potential conflicts and the economic costs involved in resolving them.
3. May result in increased court challenges unless adequate provision is made for public comment, review, and presentation of counter-evidence, and thus, may not expedite resolution of conflicts.
4. Does not assure consideration of all development alternatives which are consistent with preservation of the species.

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Revised 12/30/81

Issue: Are there ways of streamlining the listing process?

Discussion:

The listing process, as presently constituted, is unnecessarily involved and time-consuming (see attached flow-chart). Listing a species under ESA presently requires:

1. a delineation of Critical Habitat in most cases, with an accompanying economic analysis (see separate option paper);
2. a determination of effects of rules under E.O. 12291 and the Regulatory Flexibility Act;
3. preparation of an Environmental Assessment under NEPA;
4. publication of a proposed rulemaking, with notification to the affected public through newspapers and a public meeting if Critical Habitat is included in the proposal;
5. if requested, a public hearing on the proposal;
6. an offer of the substance of the proposal to appropriate scientific journals; and
7. notification, accompanied by copies of NEPA documents, to local governmental units.

Subsequent to proposal, at least 90 days must be allowed for Governors of affected States to comment. In practice, this effectively makes 90 days the minimum public comment period. Several courses have been suggested to reduce procedural complexity.

Options/Evaluation:

More than one option may be chosen but some are incompatible.

- A. Reduce or eliminate the requirement to designate Critical Habitat at the time a species is listed (see separate option document on this issue).
- B. Amend the ESA to remove duplicative requirements of NEPA procedures. (Statutory change)

Pro:

1. Analyses performed under NEPA are partially duplicative of ESA's required impact analyses and those required by E.O. 12291 and the Regulatory Flexibility Act. This duplication could be removed.

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2. The ESA does not permit administrative discretion in the decision whether to list a species, so long as the best available information substantiates the appropriateness of listing. The consideration of alternative courses of action takes place before the decision to list is reached and may not be appropriate at the proposal stage when an EA is prepared.
3. NEPA and ESA have substantially coincident goals of environmental consideration, so that NEPA compliance for actions mandated under ESA appears illogical to some. This was a view expressed by one former chairman of CEQ and in a recent court case (PLF vs. Andrus 79-1451 (6th cir. August 19, 1981)). However, a previous court case ruled that ESA listing did require preparation of NEPA documents (Glover River Org. vs. DOI civ. o. 78-202-c (E.D. Oklahoma 12-12-80)).

Con:

1. Failure to comply with all NEPA requirements could foster the impression that less stringent standards are applied to conservation-oriented Federal actions than are applied to actions directed toward resource development.
 2. Further consideration of alternatives to listing may stimulate creativity.
- C. Simplify the present hearing/meeting requirements contained in Section 4 of ESA, so that a single, well understood proceeding could serve for public notification of listing actions. At present, the differences in format and purpose of the two proceedings are somewhat artificial, with a meeting intended as an opportunity for discussion, and a hearing for the presentation of testimony on the record. (Statutory change)

Pro:

1. Reduces present public confusion regarding the constitution of a meeting vs. hearing and conditions requiring one or the other.

Con: None identified.

- D. Remove requirement to offer proposals to scientific journals. (Statutory change)

Pro:

1. Simplifies procedures without hampering appropriate notification process; most journal editors don't know what to do with proposals, don't publish notices, and, given publication schedules, couldn't get them out within the comment period.

Con: None identified.

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- E. Require a public meeting for all listings whether or not critical habitat is designated; and allow for a hearing upon request. (Statutory Change)

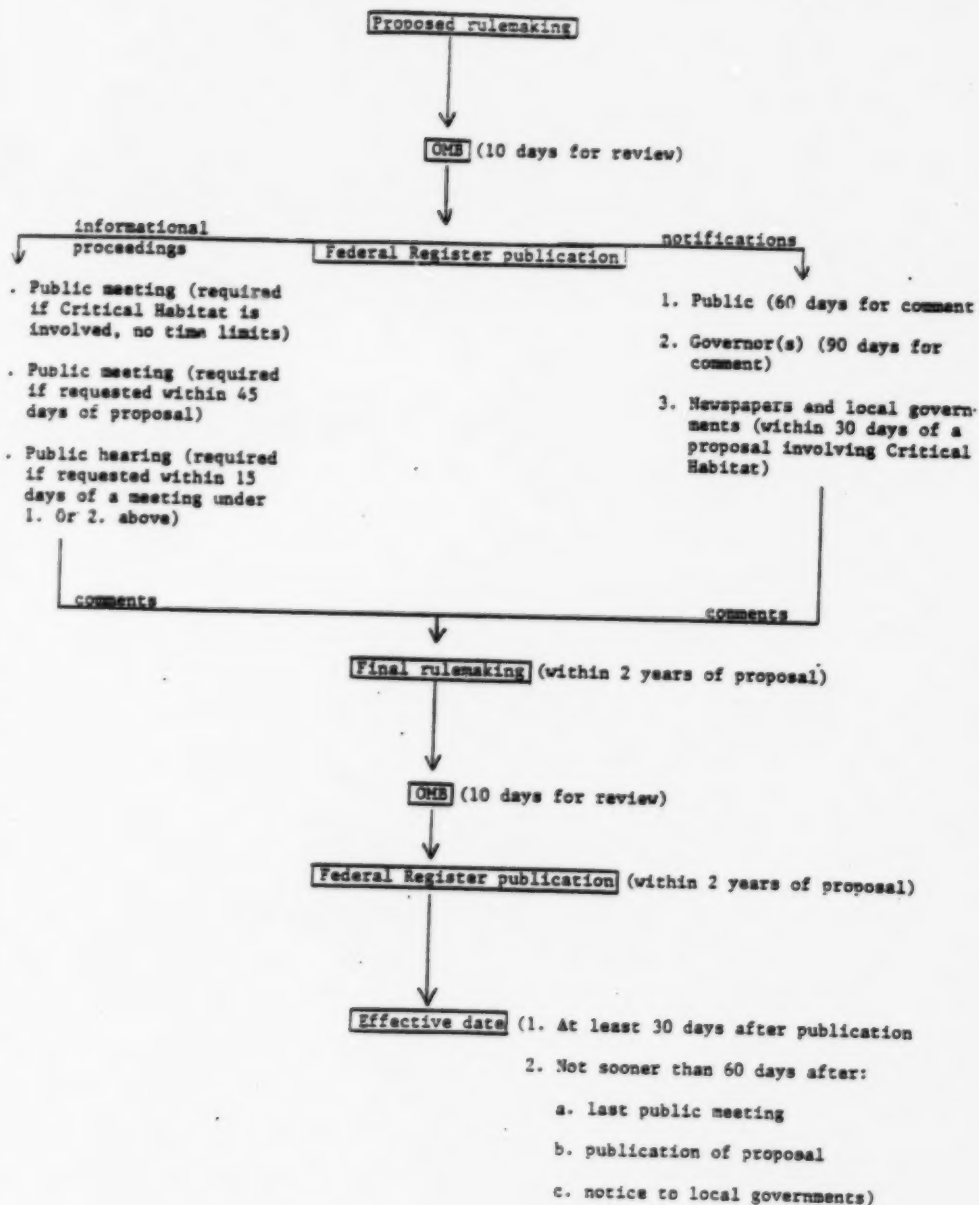
Pro:

1. Affords the public a greater opportunity to comment.

Con:

1. Will result in substantial additional costs in listings.

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Revised 12/30/81

Issue: Is it desirable to retain Critical Habitat designations?

Discussion:

Section 7 of the 1973 Act contained language prohibiting Federal agencies from destroying or modifying habitat determined to be critical to an Endangered or Threatened species. As a means of identifying such habitats to affected agencies, the Service developed rules identifying "Critical Habitat" (C.H.) of particular species. The concept was embodied into law with the 1978 amendments to the Endangered Species Act, in which it was required that C.H. be specified "to the maximum extent prudent" at the time a species is listed and that an analysis be performed at that time of the economic effects of the designation of C.H., to allow the Secretary to decide whether any area might be excluded from designation to alleviate such impacts. A separate paper addresses how and when economics should be considered. The legislative history indicates that Congress primarily wished C.H. to serve as a notification to the public of where the species in question occurs.

There has been widespread misunderstanding of the C.H. concept. Critical Habitat has been rather consistently perceived by the public at large as tantamount to the designation of an inviolate preserve, which would curtail or forbid all human activities within the area so designated. As originally conceived by FWS, C.H. was principally a device for notifying Federal agencies of areas in which they might be subject to the provisions of Section 7 of the Act. Despite contrary interpretations, C.H. designation was not intended to carry with it broad or categorical prohibitions on Federal, State, or private activities.

Because of this popular misunderstanding, there has often been strong resistance to the designation of Critical Habitat by local residents and commercial interests. Due to this misapprehension and the analysis requirements of the 1978 amendments, C.H. designation has added significantly to the complexity of the listing process and does not add to the protection afforded listed species, in most cases. Whether or not C.H. is designated for a listed species, Federal agencies are prohibited by Section 7 of the Act from directly or indirectly jeopardizing its continued existence. Practically speaking, it is virtually impossible to destroy or adversely modify C.H. without also causing jeopardy to the species involved. For this reason, the underlying assumption of the analysis requirements—that impact of a species' listing on projects authorized, funded or carried out by Federal agencies can be minimized or eliminated by reducing the size of a Critical Habitat—has been widely questioned. Historically, the destruction or adverse modification of C.H. has rarely, if ever, been the principal basis for a negative biological opinion in consultation under Section 7. Designation of C.H. on private land has prompted complaints that, in effect, it amounts to a "taking" of private property without compensation. Proposed designation of C.H. for the Illinois mud turtle on

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land owned by Monsanto Corporation prompted resistance by Monsanto that probably ultimately led to withdrawal of not only the C.H. proposal, but of the proposed listing of the turtle.

Additionally, C.H. designation has sometimes been misinterpreted by the public as applying to the provisions of Section 9 of ESA, so that taking prohibitions would apply to listed animals only within the confines of officially designated C.H.

Federal agencies have often resisted the designation of C.H. on lands for which they have management responsibility because they feel that considerations imposed by FWS will effectively override their own management authorities. This is illustrated by resistance to proposed C.H. for the grizzly bear that would have included NPS land and National Forest land; opposition was not directed against protecting grizzlies, which was generally supported by NPS and USFS, but rather on the C.H. designation, which was perceived as potentially interfering with management by the agencies involved.

In light of such persistent objection to and misunderstanding of C.H. and the doubtful benefit it brings to listed species, it has been used as a sort of "tar baby"—an attractive concept of theoretical usefulness that has, because of procedural complexity and common misunderstanding, done more harm than good for the conservation of Endangered and Threatened species.

It should be mentioned that, in some cases, C.H. may be an important tool in the conservation of listed species. This could be true for some wide ranging species that nevertheless have very specific and localized habitat needs at some critical life cycle stage (as in nesting habitat for sea turtles or migratory birds). Unless the protection of such habitat is adequately considered in determining "jeopardy," C.H. designation can be the most useful means of addressing conservation needs of such species.

Comments Received:

Most FWS regional offices supported elimination of formal Critical Habitat designation because of the confusion it engenders in the public mind and the degree to which it slows the listing process. Other comments suggested that there be less focus on the "real estate" and more on the "constituent elements" of the habitat upon which species actually depend. Several comments indicated that Critical Habitat might more logically be considered as part of recovery or consultation.

Options/Evaluation:

- A. Retain present C.H. procedures. At present the ESA requires the Secretary to determine C.H. at the time of listing (except in cases where it would not be prudent to do so; i.e., where taking is a problem). Public notification procedures and the requirement of an economic analysis are presently required by the ESA in connection with C.H. determinations. The question of how and when economics should be handled is dealt with in a separate option paper. (Status quo).

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Pro:

1. Insures that there is formal notification regarding highly sensitive habitat areas for Federal agencies, license and permit applicants, and the public at large, so that agencies can better assess whether their actions "may affect" an endangered species.
2. Retains whatever increment of protection C.H. affords listed species.

Con:

1. Complicates and slows the listing process, often with little benefit to species involved.
 2. Prompts public opposition to the program as a whole because of common misinterpretation of the concept.
 3. May improperly focus protection efforts on "real estate," rather than more appropriate consideration of the specific needs (constituent elements and geographic range) of species.
- B. Eliminate mandatory designation of C.H. concurrent with listing, but in all listings retain appropriate procedures for notifying affected agencies and the public of the species' habitat information (including geographic range and constituent elements). Designations of C.H. could be made upon a finding of benefit to the species, rather than prudence, and could be either undertaken or forewarned at time of listing (under this system C.H. would be done in probably less than one percent of all cases). When and how economics should be considered is handled in a separate option paper. (Statutory change)

Pro:

1. Lessens public resistance based on misunderstanding.
2. Reduces complexity of listing in some or most cases.
3. Retains authority to designate Critical Habitat when it is judged beneficial.

Con:

1. Retains complex Critical Habitat designation in some cases.
2. Requires that consideration of "jeopardy" address habitat conservation.
3. May meet with Congressional resistance because of apprehension of "secret" Critical Habitat catching projects unaware (however, this may be eliminated by less formal notification procedures).

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- C. Designate Critical Habitat only on Federal land. This option would also provide for informing the public of the species' habitat information (including geographic range and constituent elements). When and how economics should be considered is handled in a separate option paper. (Statutory change)

Pro:

1. Retains authority to designate Critical Habitat in those situations in which it is most likely to be effective.
2. Eliminates potential controversy over "taking" of private property.
3. Reduces complexity of listing process in some cases.

Con:

1. Does not entirely eliminate public resistance to designations stemming from potential restrictions of public use on Federal land.
 2. May reduce ability to protect some species from indirect effects of Federal action on non-federal land.
 3. Does not entirely eliminate complex Critical Habitat procedures in listing process.
 4. May complicate management practices for Federal land-managing agencies.
- D. Eliminate Critical Habitat designations entirely, while still providing for appropriate notifications to agencies and the affected public concerning the species' habitat information (geographic range and constituent elements). When and how economics should be considered is handled in a separate option paper. (Statutory change)

Pro:

1. Lessens public resistance based on misunderstanding of program.
2. Reduces complexity of listing process.
3. Allows resolution of conflict to be addressed in consultations, where they may be more appropriately dealt with.
4. Retains notification procedures for agencies and public.

Con:

1. Reduces program ability to protect habitat for some species (however, appropriate application of "jeopardy" may provide this).

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- E. Require for all listings separate designations of "essential habitat area," (i.e., habitat essential for continued existence) and "essential recovery area," whether or not they cumulatively are called "critical habitat." Continue with 4(b)(4) analysis. Require notification of each landowner affected. In regard to "essential areas," require acquisition through purchase, donation, easement or condemnation. Require study of acquisition option for "recovery areas," without condemnation authority. (Statutory Change)

Pro:

1. Affected public and Federal agencies are notified of critical areas.
2. Separates essential habitat from recovery areas.
3. Acquisition requirement adds to protection of species where habitat is acquired.

Con:

1. Designation may not be appropriate for some species.
2. Additional notification could result in additional costs.
3. Funds unlikely to be available to meet acquisition requirement, thereby eliminating future listings.
4. Eliminates Secretary's authority to condemn areas for recovery.

Revised 11/24/81

Issue: Should the petition process under Section 4 of ESA be modified?

Appendix B - I.C.2.a.9. Priority II

Discussion:

It has been suggested that petitions to undertake listing/delisting pursuant to Section 4 of ESA be required to provide information sufficient to perform impact analyses required for Critical Habitat and E.O. 12291. At present, ESA requires that a petition be accepted if it presents substantial evidence that the action petitioned is warranted. The ESA requires that a status review be carried out and if the information warrants it, a notice of review must be published in the Federal Register. This does not impose a large burden due to the small number of petitions received. (See Appendix which provides petition statistics.)

Options/Evaluation:

- A. Accept only petition presenting substantial biological evidence that a status survey is warranted under ESA. (Status quo)

Pros:

1. Allows due consideration to be given to all substantial petitions.
2. Maintains FWS' posture of responsiveness to public interest.

Cons:

1. Sometimes results in some staff resources and time being devoted to relatively low-priority actions in preference to higher-priority actions because the former have been petitioned.

- B. Accept any petition presenting substantial biological evidence that a status survey is warranted, but not be required to give special listing priority to petitioned actions. Through Section 4 regulations, FWS could request that the petition provide economic impact data if it is available. (Regulatory and Statutory Change)

Pros:

1. Retains beneficial features of present system.
2. Maintains integrity of FWS priority system by not exposing it unduly to outside forces.
3. Allows FWS to request economic data if it is available.

Con:

1. Not as responsive to the public.

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- C. Accept only petitions presenting both biological and economic impact information sufficient to justify a status review and to perform required listing process analyses. FWS would not be required to give listing priority to petitioned species. (Statutory Change)

Pros:

1. Reduces number of petitions requiring consideration. Thus allows FWS more control over its listing priority system by reducing outside influences.
2. Increases the amount of available impact-related information at an early stage of rule development for petitioned actions, thus reducing FWS' information-gathering workload.
3. Would be especially useful if economic considerations become part of the basis of listing decisions (see paper on economics, Priority 1, Issue 4).

Cons:

1. Would probably be viewed by many as an attempt by FWS to be less responsive to citizen petitions than it has been in the past and to ignore the interests of outside individuals and groups desiring particular actions.
2. May place an unreasonably large burden on petitioners to gather economic information.
3. Results in petitions not being given formal consideration although they present substantial biological evidence that a status survey is warranted.

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APPENDIX

Petitions

<u>Year (FY)</u>	<u>Number Received</u>	<u>Number Rejected</u>	<u>Notices of Review</u>	<u>Other</u>
74	28	1	11	2*
75	99	4	55	14*
76	87	1	66	12*
77	48	2	29	8*
78	29	5	12	4*
79	21	12	2	5*
80	35	7	26	2*
81	23	9	8	6*

* Still under review, referred elsewhere, or lost.

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Revised 12/30/81

Issue: Should the ESA afford protection to populations and subspecies?

Discussion:

The ESA presently allows the listing of subspecies and, in the case of vertebrates, populations as Endangered or Threatened. This allows Federal protection to be extended to particular segments of vertebrate species that are not endangered or threatened throughout their ranges and to taxa at a rank lower than species. The authority for listing of vertebrate populations has led, for example, to protection of the grizzly bear in the conterminous states. Authority to list subspecies has led to such situations as differing listing status being accorded different subspecies of the peregrine falcon.

The authority to list populations of vertebrates has largely been used to protect significant populations of wide-ranging species, such as the gray wolf in the conterminous U.S., or to introduce flexibility in the protection of such species as the American alligator, whose populations in various parts of its range are accorded varying degrees of protection or no protection. Loss of this authority could result in loss of U.S. populations of some species, or conversely, the inappropriate listing of non-Endangered populations of some species because they were endangered in other significant portions of their ranges. If, as an example, the conterminous states' population of bald eagles were judged "significant," its listing would include the non-Endangered Alaskan population. GAO raised the unfounded concern that populations of squirrels in a city park could be listed. This concern is unfounded because the FWS has administered the Endangered Species Program in such a way as to only deal with "significant" populations. Some effort may be needed to define "significant." Considerations here could include: (1) How far removed from other portions of the range is the population?; (2) Does the population's range constitute a large percentage of the entire species' range?; (3) etc.

The authority to list subspecies has allowed conservation measures to be initiated for taxa below the rank of species, although other taxa within the same species do not qualify for listing. For the most part, such subspecies represent genetically distinct and isolated groups of organisms differing only in degree of differentiation from those that would be considered separate species. In some cases, these are "incipient species" that could be expected to merit specific recognition at some future time. In other cases, a difference of taxonomic opinion results in the same taxon being recognized as either a species or a subspecies by different specialists. Loss of the authority to list subspecies could result in loss of genetically distinct taxa of some species or the inappropriate listing of, e.g., Alaska sea otters if the southern subspecies were judged to represent a "significant portion" of the range of the species as a whole.

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In practice, there is every gradation from perfectly distinct, though closely related species, through well delineated subspecies to conspecific populations of varying degrees of distinctness.

Comments Received:

Some comments recommended that listing be limited to "distinctive" populations and subspecies, or that intraspecific taxa and populations be accommodated in the definitions of "Endangered" and "Threatened," rather than that of "species." One comment repeated the apprehension, voiced originally in the General Accounting Office's report, that the squirrels in one park could be listed, although squirrels elsewhere were abundant. This issue has also arisen in congressional oversight hearings, where it was considered to be worth continued attention, but not a cause of immediate concern.

Options/Evaluation:

- A. Retain authority to protect subspecies and "significant" populations, by altering the Regulatory Definition of "Species." Provide guidance on how "significant" is arrived at and develop in coordination with NMFS. (Regulatory Change)

Pros:

1. Allows protection of most significant genetic resources.
2. Prevents possibility of conflict between human activities and relatively insignificant populations of non-threatened species.
3. Affirms present administrative policy and practice under the ESA.
4. Reduces apprehension that "squirrels in one park" will be listed.

Cons:

1. Problem of defining "significant population."
2. May allow some populations to "fall through the cracks" because their significance is not appreciated early enough.

- B. Eliminate authority to protect subspecies and vertebrate populations. (Statutory Change)

Pros:

1. Devotes FWS efforts and resources to those species that are in greatest danger of extinction throughout their ranges.
2. Reduces conflicts between human activities and protective measures for some subspecies or populations that might otherwise be listed.

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Cons:

1. Reduces ability to conserve unique genetic resources represented in subspecies and populations that could not be protected.
2. Might allow the loss of some species from their ranges within the conterminous states because of their relative abundance elsewhere (e.g., bald eagle, peregrine falcon, gray wolf).
3. Could result in "blanket" listing of some species, including non-endangered populations or subspecies, with attendant taking restrictions and consultations under Section 7.
4. May be strongly resisted by the public if it resulted in loss of protection for e.g., southern population of bald eagle.

Revised: 12/7/81

REAUTHORIZATION/REGULATORY REVIEW OF THE ESA

Issue: What changes, if any, should be made to the § 7 exemption process?

Appendix B: I.F. 2. C. (Priority I-8)

Discussion of Issue: Prior to the Endangered Species Act Amendments of 1978 there was no recourse from a negative biological opinion. The Supreme Court held in *TVA vs. Hill* (the Tellico Dam case) that Section 7 imposed an absolute duty on every Federal agency to give overriding consideration to the protection of endangered species in deciding whether to authorize, fund, or implement a project. The balancing of economic values against the values of preserving an endangered species was not permitted by the Act. The decision halted the Tellico project, and prompted the 1978 Amendments, establishing the exemption process.

Eligible applicants for an exemption from the requirements of Section 7(a)(2) are the action agency, the Governor of the State in which a proposed action would occur, or a person whose Federal permit or license application has been denied primarily on endangered species grounds. Within 30 days after an application is submitted to the Secretary, a three member review board is empanelled to determine: 1) whether any required biological assessment was conducted, 2) whether the Federal agency or the permit or license applicant refrained from an irreversible or irretrievable commitment of resources that foreclosed alternatives that would have conserved the species, 3) whether consultation was conducted in good faith, and 4) whether there is an irresolvable conflict. Findings must be made within 60 days (or longer by mutual agreement of the applicant and the Secretary). If a review board makes affirmative determinations on all four questions, the application is forwarded to the Endangered Species Committee for decision, along with a report discussing: 1) the availability of reasonable and prudent alternatives to the proposed action, 2) the nature and extent of the benefits of the agency action and of alternative actions consistent with conserving the species or its habitat, 3) the evidence concerning whether or not the proposed action is in the public interest and is of national or regional significance, and 4) appropriate and reasonable mitigation and enhancement measures to be considered in granting an exemption. The report must be submitted to the Committee within 180 days of the threshold determinations by the review board.

The Endangered Species Committee (ESC) is a cabinet level committee, composed of the Secretaries of Army, Agriculture, and Interior, the Administrators of EPA and NOAA, the Chairman of the Council of Economic Advisors, and a presidential appointee from each affected State. The ESC has 90 days to decide on an application. To grant an exemption the ESC must determine that:

1. There are no reasonable and prudent alternatives to the proposed action;
2. The benefits of the action clearly outweigh the benefits of alternative courses of action consistent with conserving the species;
3. The action is in the public interest and is of regional or national significance.

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In granting an exemption, the ESC must specify reasonable mitigation and enhancement measures that minimize the adverse effects of the agency action upon the species. The exemption applicant bears the responsibility for carrying out and paying for these measures, and must report annually to the CEQ until the measures are completed. Decisions on exemption applications by the ESC constitute final agency action, but are subject to judicial review.

Comments Received on Issue

Only four commenters addressed the exemption process; however, this tally may be somewhat misleading. A number of other commenters recommended that consultation be expanded to include consideration of the economic merits of the proposed project. Economic considerations are now the principal concern and exclusive province of the ESC. Thus, although the exemption process may not have been addressed specifically by some respondents, their recommendations for revision of consultation contain implicit suggestions for restructuring the ESC. Numerous commenters opposed this position, and recommended that consultation be devoted exclusively to biological considerations. The recommended changes were as follows:

1. Reduce the time allotted to the review board for making threshold decisions from 60 to 30 days. (1 Federal agency)
2. Reduce the period which the ESC has to reach its exemption decision from 90 to 30 days. (1 Federal agency)
3. Revise the consultation-exemption process so that economic considerations are addressed sooner. In the extreme, permit the action agency to determine whether a conflict exists and whether the species in question is of sufficient import to warrant modification or termination of the proposed project. Although not specifically addressed, this latter would probably eliminate the ESC. (1 State, 1 industry association, 1 association of State and local governments).
4. Allow an exemption application to be considered by the ESC immediately after consultation and a jeopardy finding without waiting for final agency action on a permit application. (2 associations of State and local governments)

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Options

The following options provide for structural and procedural choices in handling exemptions from negative biological opinions, given the existing listing and consultation processes. If decisions are made to recommend certain changes in those processes (see related section 4 and 7 issue papers), the options below may be irrelevant. The relationships among the various issues are presented in the separate discussion paper integrating the section 4 and 7 papers.

- (A) Retain the present system. Under the present system, a federal agency, a license or permit applicant, or the governor of the state in which the project would occur, may apply for an exemption from a negative biological opinion. Applicants for any federal license or permit must receive a final denial from the permitting agency before applying for an exemption. The two-step process (Review Board/ESC) to consider and act on the application takes no more than one year. A review board is convened to make certain threshold decisions no later than 90 days after the application. The board then prepares a report to the Committee within 180 days. The Committee must act within 90 days of receiving the report. See attached diagram.

Advantages

- (a) Requirement of final agency action on license and permit denials assures that all other issues are resolved before invoking this process.
- (b) Review board step assures that frivolous cases do not take the time and attention of Cabinet-level officials.
- (c) Stature of the process as a court of last resort reflects Congressional intent to protect endangered species; only conflicts involving proposed projects of regional or national significance are brought before the Committee.

Disadvantages

- (a) The process takes a year to complete, which some consider to be too long.
 - (b) Access to the process is considered by some to be overly restrictive.
- (B) Eliminate the Review Board; reduce timeframes. Upon receiving an application for exemption, the Secretary would have 30 days to make the threshold determinations, with the concurrence of the Federal members of the Committee. Where no irresolvable conflict is found (including inadequate consideration of available alternatives), the matter would be returned for further consultation. Findings of "bad faith" (including irreversible or irretrievable commitments of resources) would make the applicant ineligible for an exemption. Applications which received positive threshold determinations would be processed according to the current procedure, except that the Committee would make its decisions within 10 days of receiving the staff report. Total time saved over Option (1) is 140 days. See attached diagram.

(STATUTORY)

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Advantages

- (a) Avoids administrative tasks of appointing review board and conducting formal inquiry into the threshold issues.
- (b) Reduces time to consider threshold issues by 60 days.
- (c) Reduces time to make Committee decision by 80 days.
- (d) May simplify preparation of report to the Committee.
- (e) Retains prestige of a high level decision making group.

Disadvantages

- (a) Greater amount of Secretary's time will be required in order to make the threshold decisions. Could require additional staff and budget.
 - (b) Potential perception of conflict of interest since Secretary is to issue the biological opinion (under the Act) as well as determine whether an irresolvable conflict exists.
 - (c) Eliminates a level of review of the biological issues by an independent body.
 - (d) May make it difficult to assemble a quorum within period allotted for decision.
- (C) Streamline process; require applicant to prove case; three suboptions for structure of decision-making body. Upon receiving an application for exemption, the Secretary has 30 days to reach a decision on whether or not to accept the application. Criteria remain the same as those currently used by the Review Board. Following acceptance, applicants have up to 1 year to present to the Secretary their evidence that an exemption should be granted (on the same grounds currently in the Act). Through the public notice and comment process, any other interested party has at least 60 days after the Secretary's acceptance of an application to provide information either in support of or in opposition to the application. Within 60 days after receipt of the applicant's final submissions, the decisionmaker(s) (see suboptions a-c) consider the evidence and act(s) on the application. (During the 60 review period, public hearings may be held.) In cases where the Federal action agency is the Department of the Interior, the Secretary's role will be filled by the Secretary of Commerce, and vice versa. Total time to consider the exemption would be 150-450 days, depending on decisions made by the exemption applicant. See attached diagram.
- (STATUTORY)

Advantages

- (a) Provides a less cumbersome process than the current system.
- (b) Total time for granting an exemption can be as little as 150 days.

Disadvantages

- (a) Requires more of the Secretary's time and could require substantial staff and budget increases if simplified process results in increased applications.
- (b) Eliminates a level of review of the biological issues by an independent body.
- (c) Potential perception of conflict of interest, since Secretary is to issue the biological opinion (under the Act) as well as determine whether an irresolvable conflict exists.
- (d) No independent study of alternatives by Secretary's representatives.

Suboptions for Option (c)

- (C)(i) Secretary as Decisionmaker. The Secretary alone would consider the evidence submitted by the applicant and by other interested parties, and make a decision whether to grant the exemption.

Advantages

- (a) Eliminates administrative costs associated with assembling and staffing interagency committee.

Disadvantages

- (a) Responsibility for exemptions falls solely on the Secretary, not shared with other Cabinet officials.
 - (b) Could be viewed as a less important process without the participation of other Cabinet-level officials.
 - (c) Provides for no State participation in the exemption decision.
- (C)(ii) Limited Committee as Decisionmakers. An ad hoc committee consisting of the Secretary, the head of the action agency, and the Governor(s) of the affected State(s) would be convened for each application, and would make the decision whether to grant the exemption.

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Advantages

- (a) Retains role of state in considering the merits of the issue.
- (b) Provides action agency voice in deliberations.
- (c) Retains prestige of a specially constituted body, rather than requiring a decision by one official.

Disadvantages

- (a) In the case of a license or permit applicant who applies for an exemption, the head of the action agency may be an unwilling participant in the process.
- (b) By reducing the broad background of the membership of the Committee, and by making it ad hoc for each application, the Committee could approach the issues with a bias in favor of the project. The criteria for an exemption include economic considerations and national or regional significance. An ad hoc, narrowly based Committee could easily be perceived as having pre-judged those issues. Option C(iii) could solve this problem.
- (C)(iii) Present Committee as Decisionmakers. The existing Endangered Species Committee would make the decision whether to grant the exemption.

Advantages

- (a) Retains role of State in considering merits of the issue.
- (b) Retains the prestige of a specially constituted body, rather than a decision by one official.
- (c) Creates a standing, broadly based decision making body, maintaining its current stature and integrity.

Disadvantages

- (a) Larger Committee (than (Cii)) could be more cumbersome.
- (D) The action agency makes the exemption decision. Following the issuance of a jeopardy opinion, it would be the responsibility of the head of the action agency to decide whether or not an exemption is warranted. In making the exemption determination, the action agency would use the standards specified in the Act (the same standards now utilized by the ESC). Opportunity for public comment, response, and presentation of counter-evidence would be mandated in the statute.
(STATUTORY)

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Advantages

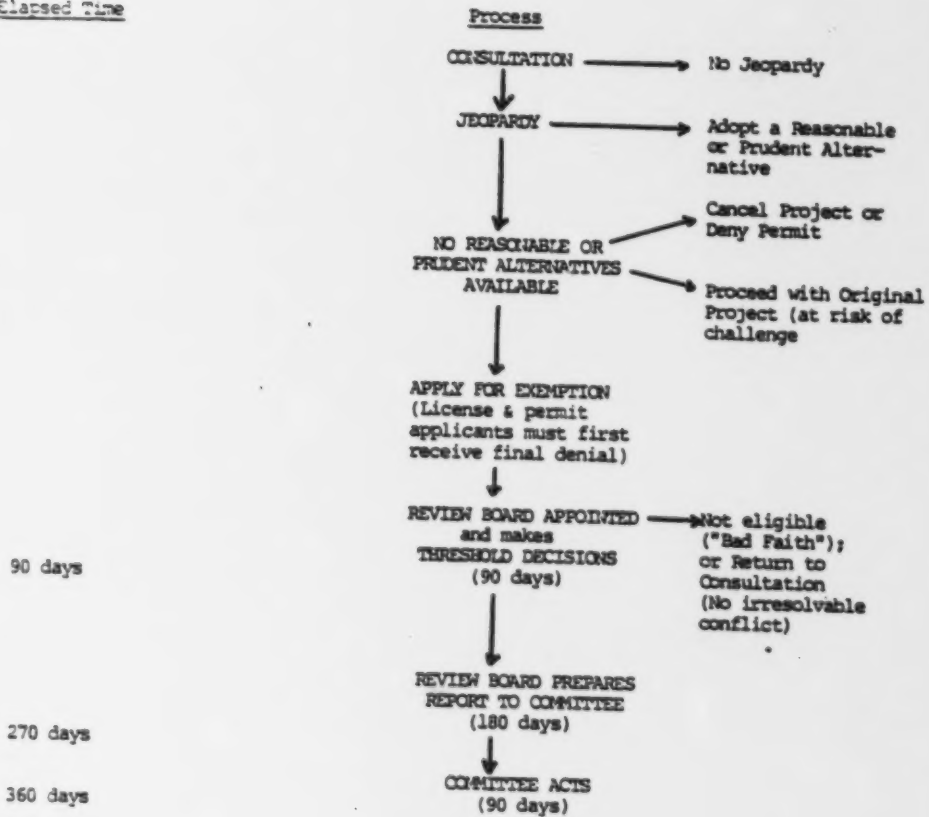
- (a) Simplifies and could accelerate exemption process.
- (b) Biological issues remain the responsibility of the wildlife agencies; non-biological issues are considered by action agencies.
- (c) Length of time to process exemption is responsibility of action agency; Interior/NOAA not vulnerable to criticism for any delays.

Disadvantages

- (a) May be viewed as diminishing importance of exemption process.
- (b) May call into question the impartiality of the exemption process, and increase the likelihood of litigation and judicial review.
- (c) License or permit applicant has no impartial administrative forum to petition for review of denial of application on endangered species grounds.
- (d) Action agency may not welcome decision-making responsibility and may be excessively conservative in considering the merits of the project.
- (e) Provides for no State participation in the exemption decision.

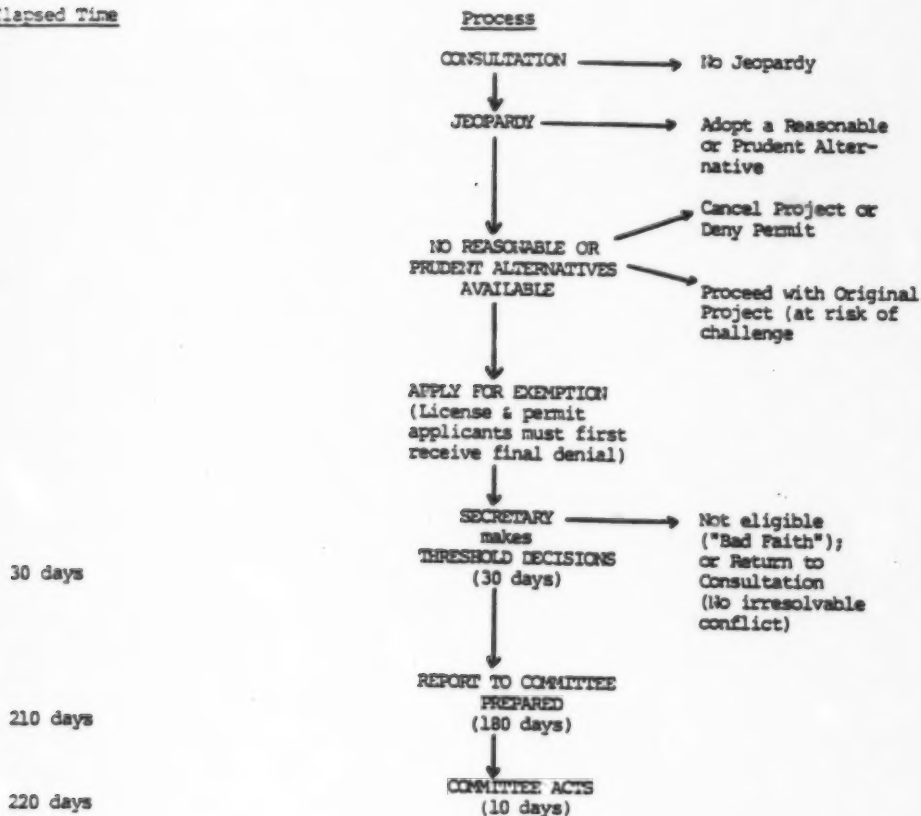
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DIAGRAM OF OPTION A

Elapsed Time

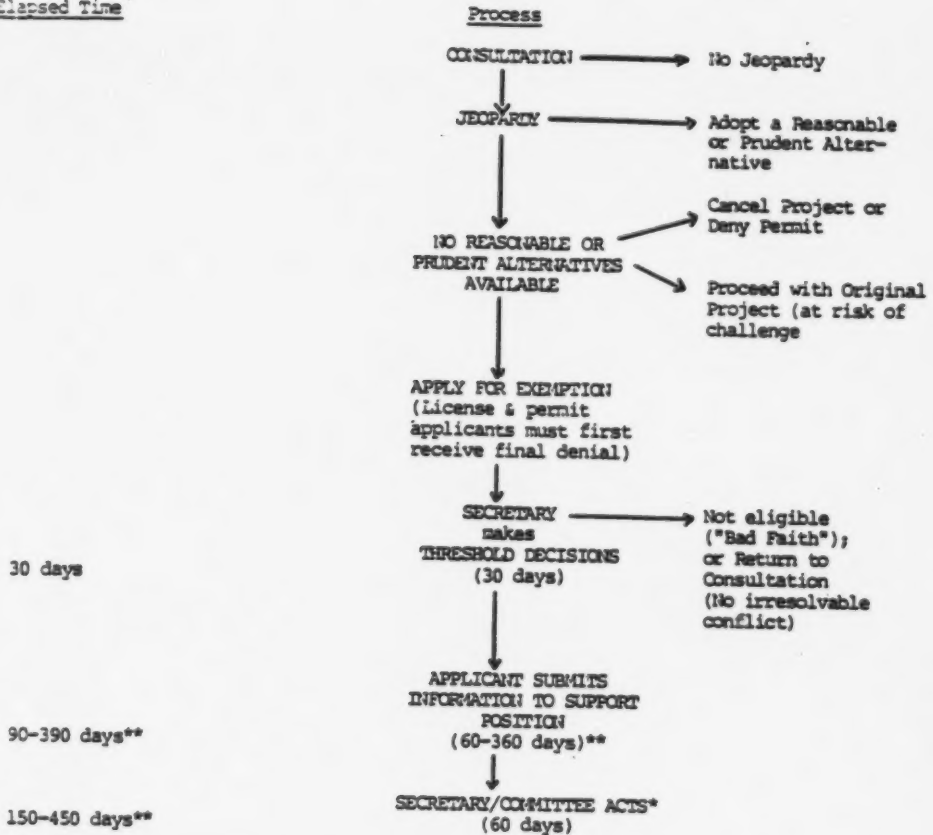
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DIAGRAM OF OPTION B

Elapsed Time

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DIAGRAM OF OPTION C*

Elapsed Time

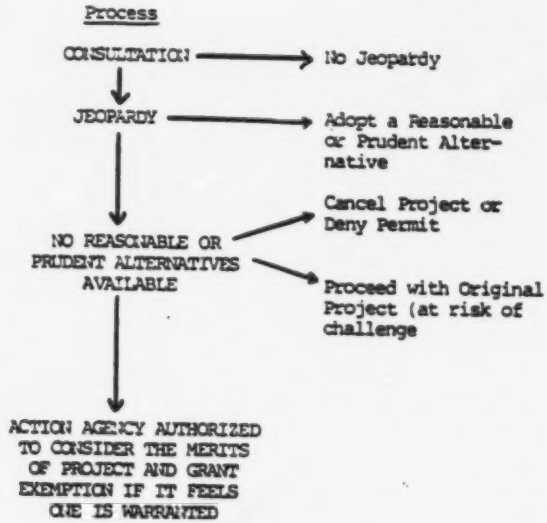
*Suboption (1): Decision by Secretary

Suboption (2): Decision by limited, ad hoc Committee

Suboption (3): Decision by existing, standing Committee

**Range depends on when applicant submits supporting information

DIAGRAM OF OPTION: D

Elapsed Time

Time depends
on action agency
procedures

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SUMMARY OF TIMES TO COMPLETE EXEMPTION PROCESS

Elapsed time in days

<u>Event</u>	<u>Option A (Status Quo)</u>	<u>Option B</u>	<u>Option C</u>	<u>Option D*</u>
Apply for Exemption	0	0	0	N/A
Threshold Decisions Made	90	30	30	N/A
Information Developed for Making Exemption Decision	180	180	60-360**	N/A
Decision on Exemption	90	10	60	N/A
TOTAL	<u>360</u>	<u>220</u>	<u>150-450**</u>	<u>N/A</u>

*Under Option D, all times depend on the procedures each Federal agency develops to implement this provision of the Act.

**Range depends solely upon when the applicant for the exemption submits information to support the exemption request.

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Revised 12/30/81

Issue: Can the Section 7 consultation/conference procedures be streamlined?

Discussion:

Prior to the 1978 and 1979 Amendments, Section 7 of the Endangered Species Act (ESA) required that Federal agencies consult with the FWS and NMFS on the impact of their actions on listed species, and that the FWS/NMFS respond with a biological opinion within 60 days. There was no requirement for a conference on proposed species or preparation of a biological assessment as a precursor to consultation. On January 4, 1978, FWS/NMFS promulgated regulations implementing Section 7 of the ESA. These regulations clearly defined what actions were required by Federal agencies and how consultations were to be conducted. The regulations required all Federal agencies to consult on any activity or program which "may affect" listed species or their critical habitat (Section 402.04).

The Act was amended in 1978 and 1979, changing three areas relative to the consultation process: (1) The consultation time-frame was lengthened from 60 days to 90 days; (2) the requirement for a biological assessment was added to help agencies and the FWS/NMFS identify impacted species; and (3) the requirement to confer on proposed species and proposed critical habitat was added. Since revised regulations have not been published to reflect these changes, the Service has worked informally with Federal agencies to inform them of the statutory changes required by the Amendments and has suggested the use of administrative changes through the promulgation of draft revised Section 7 regulations. A flow chart of the consultation process is attached. The current time frames are reasonable and with the new regulations, the process should work well.

Comments Received:

Some of the comments received on simplification of the consultation process were the same as those received on the revised draft proposed regulations sent out for review and comment in February of this year, i.e., (1) simplification of the biological assessment procedure; (2) modifying the biological assessment process into the NEPA process; (3) clarifying the role of the designated non-Federal representative and the permit or license applicant in the consultation process; and (4) explaining the conference procedures.

These concerns have been addressed and changes which will streamline the process have been incorporated into the latest version of the draft regulations. Items (1) and (2) are fully addressed in a separate option paper on the biological assessment requirement, and are fully implemented in the revised draft Section 7 regulations. Item (3) was addressed in the regulation by allowing Federal agencies to designate non-Federal representatives to act in their capacity during informal consultations. This will allow States, consulting firms, and other non-Federal entities to deal directly with FWS/NMFS during an informal consultation process and hopefully resolve most of the problems. If they cannot be resolved in an informal consultation, the Federal agencies must then get involved and

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request formal consultation. The draft regulations incorporate Item (4) by encouraging the agencies to combine the conference requirements with consultation. It was the intent of Congress not to establish a separate requirement/procedure for the conferences and our proposed regulations make this clear.

Two other comments which may streamline the consultation process were received. One commentor (Forest Service) suggested that agencies which have adequate biological expertise be allowed to conduct their own consultations, and therefore negate the need to contact FWS/NMFS, thus streamlining the process. This suggestion is not appropriate since the existing regulations have a mechanism whereby Federal agencies can work with the FWS/NMFS to prepare counterpart regulations which are responsive to an agencies' needs or peculiarities. If an agency feels it needs special treatment, provisions for this have been made through the counterpart regulation option. No counterpart regulations have been developed. The regulations also allow for the development of aggregate consultations to cover a large number of similar activities in the same geographical area. Aggregate consultation allows agencies to group their actions under one consultation and reduce the workload. A second suggestion involves changing the triggering mechanism for consultation from "may affect" to "may adversely affect." This may reduce the consultation load by eliminating consultations on beneficial actions. It should also be noted that not all commentors felt changes were necessary, and that many felt the process worked well, was responsive to agency needs and provided valuable information and assistance to Federal agencies to allow them to fulfill their obligations under the Act. (A full explanation of this is included in a separate option paper.)

Options/Evaluation:

- A. Retain the consultation/conference procedures with draft regulatory interpretation streamlining the process and promulgate draft Section 7 regulations. The draft Section 7 regulations streamline the process in the ways discussed on Page 1. The "may affect" trigger could be changed to "may adversely affect." (Regulatory Change)

Pros:

1. Simplify the biological assessment procedure (see other option paper).
2. Explain the relationship of the assessment process to the NEPA process.
3. Clarify role of non-Federal involvement in the consultation process.
4. Explain the conference procedures.
5. Shorten the consultation process (biological assessment).

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6. Provide better, more complete guidance to Federal agencies.

Cons: None identified.

B. Allow other agencies with their own biological expertise to conduct their own consultations and/or issue their own biological opinions.

B(1) Develop counterpart regulations which would allow some agencies to conduct their own consultations and prepare draft biological opinions. FWS would retain the authority to issue the biological opinion. (Regulatory Change)

Pros:

1. The action agency would be responsible for gathering the data on which the opinion would be based.
2. The action agency could utilize its own biological expertise.
3. Retain the "clean bill of health" aspect of FWS/NMFS issued non-jeopardy opinions.

Cons:

1. Before FWS/NMFS could legitimately issue the opinion, the data would have to be checked.
2. Duplicative and costly.

B(2) The Secretary of DOI would be given the discretion to delegate the authority to conduct consultations and issue biological opinions to action agencies. A set of standards would be developed to determine which agencies qualify. FWS/NMFS would not retain the ability to concur with or reject the biological opinion. (Statutory Change)

Pros:

1. Allow action agency to utilize its personnel.
2. Some action agencies wish to be responsible for issuing opinions, however, others do not.

Cons:

1. Duplicative and expensive.
2. Consultations would not be conducted uniformly.
3. Services would no longer have an overview of all agency actions affecting listed species thereby recovery efforts may be adversely affected or more expensive.

4. Action agencies would not have a total overview therefore cumulative effects would be difficult to determine possibly resulting in inaccurate biological opinions.
 5. Consultations likely to be colored by the mission and objectives of the action agency.
- B(3) Develop counterpart regulations which would allow some agencies to conduct their own consultations and prepare biological opinions. FWS would maintain authority for biological opinions on major Federal actions which would adversely affect any threatened or endangered species.

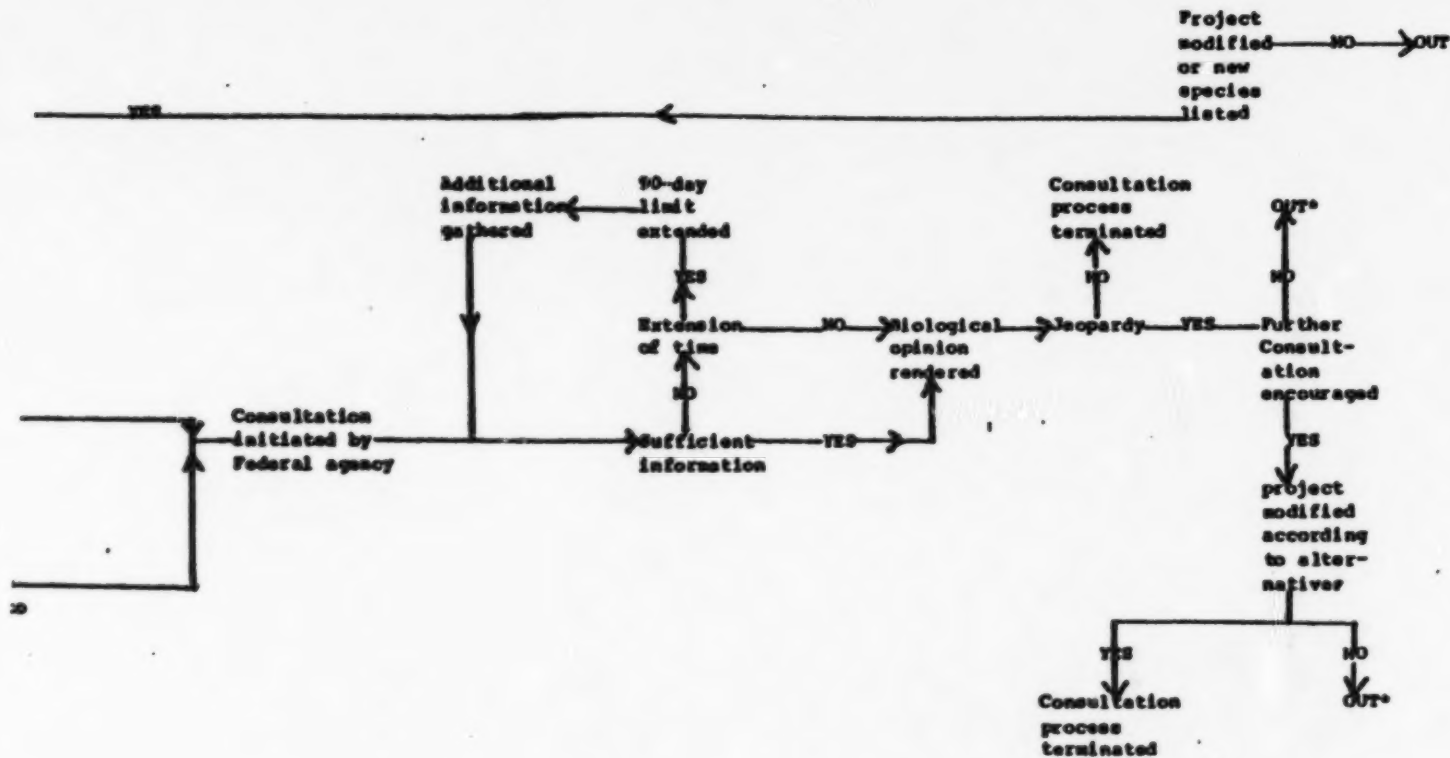
Pros:

1. Lessens number of consultations with the FWS.
2. Would reduce the workload of FWS offices now preparing biological opinions.
3. Retains authority of FWS/NMFS on major Federal actions.

Cons:

1. FWS/NMFS would not provide consultation/overview on non-major actions and protection may be reduced.
2. Overview of recovery actions and cumulative impacts by FWS/NMFS would be lost.
3. Consultations would not be conducted uniformly.
4. Duplicative.

It should be pointed out that Options A and B are not mutually exclusive. It may be possible to incorporate Option B(1) into Option A.



*Exemption Process

Revised 12/30/81

Issue: Should the Section 7 "jeopardy standard" be modified and if so should non-biological factors be introduced?

Discussion:

Section 7 (a) (2) of the Endangered Species Act of 1973, as amended, states that:

"Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species . . ."

This mandate stems from the Congressional finding in Section 2(a)(1) of the Act that states " . . . species of fish, wildlife, and plants have been so depleted in numbers that they are in danger of or threatened with extinction." Congress mandated that Federal agencies must utilize their authorities (Section 2(c) and Section 7(a)(1)) to provide a means to conserve the ecosystems upon which species depend and to provide a program for the conservation of these species (Section 2(b)).

The 1978 Section 7 regulations further define this mandate. The definition of "jeopardize the continued existence of" specifies that an agency should not engage in an activity or program which reasonably would be expected to reduce the reproduction, numbers, or distribution of a listed species to such an extent as to appreciably reduce the likelihood of the survival and recovery of that species in the wild.

Under Section 7, the primary purpose of the consultation process is to identify those areas of critical concern where a project "may affect" a listed species and to find a means to avoid jeopardy. In the case where a jeopardy determination is made, the Act mandates that the Secretary with the aid of the Federal agency develop and provide reasonable and prudent alternatives which would allow the project to proceed without jeopardizing the species (Section 7(b)).

A brief discussion of the jeopardy standard is appropriate at this point. With the passing of the Endangered Species Conservation Act of 1969, Congress requested that other Federal agencies consider listed species, and make appropriate modifications where possible. This minimum standard of "coaxing" other Federal agencies to consider listed species was not effective, and with the passing of the 1973 Act the standard was significantly strengthened by Congress. Federal agencies were then required to "consult" with FWS/NMFS to insure that their actions would not jeopardize listed species or critical habitat. The question of "relaxing" the jeopardy standard was mentioned during the 1978 reauthorization, and there is language in the legislative history indicating that Congress reconsidered the lesser standard as found in the 1969 Act, but rejected it and

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reaffirmed the criteria of the 1973 Act. The language included in the 1978 amendments to the Act, required agencies to insure that their actions do not jeopardize the continued existence of listed species. The amendments in 1979 somewhat lessened this standard by requiring agencies to insure that their actions are not likely to jeopardize the continued existence of listed species.

The strength of the jeopardy standard should be viewed in line with the intent of the Act, which is not to stop Federal actions, but to allow agencies to develop their projects while using their authorities to offer protection to listed species.

The FWS/NMFS are advocates for the species, and when problems are recognized, work with the agencies to develop reasonable and prudent alternatives, which are designed to accomplish the original intent of the agency, and to be consistent with the agencies' role and responsibilities.

Data is attached which demonstrates that most biological opinions issued are non-jeopardy opinions. FWS and NMFS have been very successful in identifying reasonable alternatives and few jeopardy opinions have been issued.

Comments Received:

Some comments received concerning jeopardy dealt with the prohibitive nature of a jeopardy opinion, i.e., stopping project development. There was some feeling that the standard was too rigid and unyielding. Two commentors felt that the Act was too inflexible to achieve a reasonable balance between the value of threatened and endangered species and the primary purposes of an agency. These commentors recommended amending the Act by revising the jeopardy standard to simply consider the primary purpose of the Federal agency, thereby establishing a new procedure that would require the agency only to insure that their actions are consistent with the agency's primary purpose. If this criterion was met, there would be no jeopardy. This sort of interpretation is not consistent with the purposes of the Act and would virtually eliminate biology and impacts to the species from all consideration. Because this modification would completely alter the purposes and intent of the Act as defined by Congress, it will not be considered further.

Several commentors felt that the jeopardy standard was adequate and others felt it should be strengthened further. In light of the wide range of comments received on this issue, the options are increasing the standard, maintaining it, or reducing it. Various options which would realize these ends are explained below.

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Options/Evaluation:

- A. Leave the jeopardy standard as it is, requiring agencies to insure that their actions are not likely to jeopardize the continued existence of listed species. (Status quo)

Pros:

1. No statutory change required.
2. Service is responsive to the agency by developing reasonable and prudent alternatives which are responsive to the primary purpose of the agency's action.
3. The evaluation does not have to consider economics, rather it is based solely on biology.

Cons:

1. Some may feel that Section 7 is inflexible.
- B. Leave the jeopardy standard as it is, but when issuing biological opinions include the expected economic costs of each of the reasonable and prudent alternatives.

Pros:

1. Service is responsive to the agency by developing reasonable and prudent alternatives which are responsive to the agency's primary purpose and action.
2. Criteria for jeopardy remains solely biological.
3. Develops information about costs of alternatives thereby assisting the action agency in making its decisions.

Cons:

1. More economic staff would be necessary in the FWS and other agencies.
 2. Some may feel Section 7 is inflexible.
- C. Reduce the jeopardy standard by prohibiting Federal agency actions which are likely to jeopardize the continued existence of listed species. Removes insure standard. (Statutory Change)

Pros:

1. May reduce the number of consultations.
2. Provides more flexibility and may reduce number of conflicts.

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Cons:

1. May subject Federal ~~agency~~ actions to more scrutiny by interest groups.
 2. Less protection in instances where little information is available on the species.
- D. Modify the jeopardy standard so that Federal agencies only have to insure that their actions are not likely to jeopardize the continued existence of the listed species to the maximum extent feasible while carrying out the agency's mission. (Statutory Change)

Pro:

1. The agencies would have the flexibility to carry out their missions unencumbered.

Cons:

1. Does not provide as much consideration/protection for the species.
 2. The action agency would be doing the balancing and be subject to more criticism.
 3. The action agency would not be an impartial body to make decisions.
 4. The term "agency's mission" is ambiguous and is thus open to interpretation.
- E. Eliminate the word jeopardy altogether and simply require the Federal agencies to seek information, guidance, and recommendations from the FWS/NMFS on the impact of their actions on listed species and critical habitats. Federal agencies would be required to give consideration to this data when developing plans. Similar to FWCA approach and the 1969 ESA language. (Statutory Change)

Pro:

1. Reduces the affirmative responsibilities agencies have for listed species, and therefore may reduce some project costs and time.

Cons:

1. Dilutes the intent of the Act and makes it no stronger than any other "environmental compliance regulations."
2. Reduces the incentive to consider alternatives and compensation/mitigation recommendations.

3. Greatly reduces the protection afforded listed species.
4. May subject agencies to significant litigation by interest groups.
5. Was rejected by Congress in 1978.

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Section 7 Consultation Briefing Paper

<u>FY-79:</u>	<u>Formal</u>	<u>Informal</u>	<u>Jeopardy</u>
	968	1,585	70
<u>FY-80:</u>	<u>Formal</u>	<u>Informal</u>	<u>Jeopardy</u>
	707	2,374	55
<u>FY 81:</u>	<u>Formal</u>	<u>Informal</u>	<u>Jeopardy</u>
	504	3,535	29

The trend has shifted to more informal consultations than formal, i.e., resolving possible conflicts at an early stage of project development and thus avoiding the need to conduct a formal consultation.

The Inter-agency Cooperation (Section 7) regulations were published January 4, 1978. Subsequently, the Act has been amended twice. New Section 7 regulations incorporating these changes have not been published in the Federal Register. However, we sent letters/memoranda to all Federal agencies informing them of the changes required by the Act.

December 14, 1981

CONSULTATION DATA: FY 1979 - FY 1981

Formal Consultation: Intra-Service (Fish and Wildlife Service)

<u>FY year</u>	<u>Formal</u>	<u>Cancelled*</u>	<u>Continuing*</u>	<u>No Jeopardy</u>	<u>Jeopardy</u>
1979	179	9	0	164	6
1980	163	1	0	158	4
1981	71	4	1	66	0

Formal Consultation: Inter-Agency (Interior and non-Interior Agencies)

<u>FY year</u>	<u>Formal</u>	<u>Cancelled*</u>	<u>Continuing*</u>	<u>No Jeopardy</u>	<u>Jeopardy</u>
1979	456	54	3	348	51
1980	332	10	2	276	44
1981	226	28	6	171	21

Formal Consultation: Wildlife Permit Office (research and import/export permits)

<u>FY year</u>	<u>Formal</u>	<u>Cancelled*</u>	<u>Continuing*</u>	<u>No Jeopardy</u>	<u>Jeopardy</u>
1979	333	4	0	319	10
1980	212	1	0	205	6
1981	207	3	0	196	8

*NOTE: Consultations cancelled either because the agency/person (permit) withdrew the request or it was determined that there was no effect to endangered species; therefore, no consultation was necessary.

Consultations continuing either because they were initiated recently, (4 consultations may be completed in the near future) or consultation was extended by mutual agreement to complete further study (8 consultations). The FWS is awaiting that information to complete the consultation process.

As far as is known, all projects receiving a no jeopardy biological opinion proceeded to completion; there were no endangered species conflicts.

IMPORTANT: This data has been collected and summarized from numerous sources. Actual figures may change, if consultations are completed or new data becomes available from the agencies.

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Formal Consultation: Breakdown of Jeopardy Opinion Data

1. Jeopardy opinions rendered, FWS' suggested alternatives accepted, and the project proceeded: 81
2. Jeopardy opinions rendered, agency decision unknown, however the project proceeded: 54
3. Jeopardy opinions rendered, FWS' suggested alternatives rejected, however project proceeded: 4
 - a. The EPA recently registered two pesticides (Lorsban and Carbofuran) prior to completion of the biological opinion (both jeopardy).
 - b. Pittston Oil refinery recently received a permit to proceed with their project. (EPA)
 - c. Idaho road construction for timber sale, FS would not agree to road closure.
4. Jeopardy opinions rendered, however discussions concerning the FWS' suggested alternatives continuing: 6
 - 6- a. Warner Valley Reservoir discussions continuing. (BLM)
 - b. Wildcat Reservoir awaiting resolution of court case. (COE)
 - c. North Fork Flathead Road Improvement (Montana) awaiting EIS. (FS)
 - d. Prairie Du Chien (Wisconsin) barge facility discussions continuing. (COE)
 - e. VA residential housing loan for vernal pool area discussions continuing. Some development begun during consultation.
 - f. Oil waste water disposal facility (California) accepted alternatives, however still negotiating with BLM over an alternative required by BLM.
5. Jeopardy opinion rendered, project cancelled or withdrawn: 5
 - 5- a. Powell River, Tennessee, gravel dredging (404 permit). Applicant withdrew the application during discussions over alternatives.
 - b. Occidental Petroleum oil well drilling. One well was drilled without authorization. After the opinion was rendered they rejected the alternatives and abandoned plans for another well.
 - c. Monterey Bay offshore oil facility. After opinion was rendered the applicant refused to conduct an oil spill risk analysis (suggested alternative), so COE denied their permit application.
 - d. COE application to fill a wet land in Hawaii cancelled for reasons other than endangered species.
 - e. Ford dealership construction in vernal pool area. Accepted alternatives, however funding problems because of slump in auto industry.

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Revised 12/30/81

Issue: Scope of the term "Federal agency action"

Discussion:

Another issue that has arisen under Section 7 is the scope of the term "Federal agency action." Section 7(a)(2) requires that all Federal agencies insure that their "actions" are not likely to jeopardize the continued existence of listed species or adversely modify their critical habitat. The Service has received numerous questions as to exactly what actions are included within that provision. For example, one question concerned the applicability of Section 7 to the issuance of NPDES permits by a State under an administrative program approved by EPA.

Associate Solicitor for Conservation and Wildlife reviewed the NPDES issue in a memorandum dated October 23, 1981 (attached), concluding that Section 7 is not applicable in that case. However, other questions still remain as to the reach of the term "Federal action." For example, the applicability of Section 7 to State actions under the Surface Mining Control and Regulation Act, or to private actions involving indirect Federal involvement such as a developer who seeks a Federal loan guarantee.

Therefore, the term "Federal action" should be clarified. This can be accomplished in one of three ways: (1) Solicitor's Office memorandum; (2) statutory clarification; or (3) regulatory clarification.

Comments Received:

None.

Options/Evaluation:

- A. Retain present situation and have Solicitor's Office prepare interpretive memoranda as questions arise.

Pro:

1. Avoids expenditure of resources on statutory or regulatory revision.

Cons:

1. Does not represent alternative which guarantees wide public knowledge of the Department's interpretation of the term.
2. Is limited to the extent that statute is subject to interpretation.

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B. Statutory clarification.

Pros:

1. Eliminates present uncertainty as to meaning of the term.
2. Clearly indicates intent of Congress as to scope of Federal review under Section 7.

Cons:

1. Represents expenditure of resources on matter that could be handled by regulations
2. Eliminates Interior control over how term is defined.

C. Regulatory clarification.

Pros:

1. Eliminates present uncertainty as to meaning of the term.
2. Retains Interior control over how term is defined.

Cons:

1. Is limited to the extent to which the present statute can be interpreted.

D. Revise statutory language to apply Section 7 only to actions undertaken or directly funded by Federal agencies and actions on Federal lands. (Statutory Change)Pros:

1. Eliminates applicability of Section 7 to most activities carried out by private entities.
2. Reduces potential for conflict with development.
3. Less funds and person-power expended for consultation.

Cons:

1. Reduces protection for listed species.
2. Need to define terms: undertaken and directly funded. These terms could result in litigation and controversy.



UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON, D.C. 20240

OCT 23 1981

Memorandum

To: Associate Director, Federal Assistance, FWS
From: Associate Solicitor, Conservation and wildlife
Subject: Applicability of Section 7 of the Endangered
Species Act to the EPA/NPDES Program

This memorandum responds to your request for our opinion on the applicability of the section 7 consultation requirements under the Endangered Species Act (ESA), 16 U.S.C. § 1536(b), to the issuance of a National Pollutant Discharge Elimination System (NPDES) permit under section 402 of the Clean Water Act, 33 U.S.C. § 1342.

The issuance of an NPDES permit can arise in three contexts: 1. the issuance of an NPDES permit by the Environmental Protection Agency (EPA) where there is no approved state program; 2. the issuance of an NPDES permit by EPA where it has exercised its right of review over a particular permit application under an approved state program and the state has refused to issue the permit subject to the terms and conditions required by EPA; and 3. the issuance of an NPDES permit by a state under an approved state program where EPA has not exercised its right of review.

We have reviewed each of these situations and conclude that where there is no approved state program and an NPDES permit authorizing a new activity is issued directly by EPA, section 7 consultation is required. ^{1/} Similarly, where EPA exercises

^{1/} This memorandum limits its analysis to the issuance of NPDES permits which authorize new sources and does not address the renewal of NPDES permits for existing sources.

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its right of review over a permit application under an approved state program and ultimately issues an NPDES permit authorizing a new activity, the issuance of that permit is subject to section 7 consultation. However, where an NPDES permit is to be issued by a state under an approved state program, and EPA waives its discretionary right of review, no section 7 consultation responsibilities arise.

Discussion

Section 2 of the Endangered Species Act provides in relevant part that,

all Federal departments and agencies shall seek to conserve endangered and threatened species and shall utilize their authorities in furtherance of the purposes of this chapter,

16 U.S.C. § 1531. To meet this declared objective, section 7(a) of the ESA, 16 U.S.C. § 1536(a), requires all federal agencies to insure that

actions authorized, funded, or carried out by them do not jeopardize the continued existence of . . . endangered or threatened species . . . or result in the destruction of [critical] habitat. . . Id.

Thus, the question of whether section 7 consultation is required for the issuance of an NPDES permit depends on whether the issuance of the permit is a federal "agency action" which may affect any endangered or threatened species.

The Clean Water Act (formerly the Federal Water Pollution Control Act) was amended in 1972 and gave the federal government, for the first time, a major role in water pollution control programs. Federal water Pollution Control Act of 1972, Pub. L. 92-500, 86 Stat. 890 (codified at 33 U.S.C. § 1251 et seq.). However, because water quality programs were traditionally the province of the states, Congress determined that states should continue to play a significant role in carrying out pollution control programs. Accordingly, Congress allowed for state administration of the effluent discharge permit program. States may administer an NPDES program if the

program meets the requirements of section 402(b), 33 U.S.C. § 1342(b), and EPA's implementing regulations, 40 C.F.R. § 123. The Clean Water Act provides that the EPA Administrator must approve a state program if it meets these statutory and regulatory requirements. Once a state program is approved, the EPA's program is suspended. § 402(c), 33 U.S.C. § 1342(c). The EPA-only retains authority then to review the proposed issuance of state permits and may prohibit the issuance of a given permit if it falls "outside the guidelines and requirements of [the Act]." 33 U.S.C. § 1342(d)(2).

The question then is whether or not there is sufficient involvement by the EPA with respect to the issuance of a given NPDES permit to constitute federal agency action within the meaning of Section 7(a)(2) of the Endangered Species Act. We conclude as follows.

EPA Issued Permits

Where there is no approved state program and an NPDES permit authorizing a new activity is issued directly by EPA, involvement by that federal agency is sufficient to subject the action to section 7. Similarly, where EPA exercises its review rights over a particular permit application under an approved state program and ultimately issues an NPDES permit authorizing a new activity, that action would also be subject to section 7.

It is important to note, however, that the exercise of this review authority by EPA is discretionary with the Administrator and may be waived as to any given permit application. 33 U.S.C. § 1342(d)(3). Failure of the EPA to object to a state issued permit cannot be equated with the issuance of a federal permit by the EPA Administrator. Chesapeake Bay Foundation, Inc. v. Virginia State Water Control Board, 453 F. Supp. 122, 125 (E. Va. 1978); State of Washington v. EPA, 573 F.2d 583 (9th Cir. 1978); Save the Bay, Inc. v. EPA, 556 F.2d 1282 (5th Cir. 1977); and Mianus River Preservation Committee v. EPA, 551 F.2d 899 (2d Cir. 1976).

State Issued Permits

As previously noted, the question here is whether there is sufficient involvement by the EPA to constitute "federal action" where the agency waives its review rights and an NPDES permit is issued by a state under an approved program. This precise issue was addressed in Chesapeake Bay Foundation, Inc. v. Virginia State Water Control Board, supra. The plaintiffs in that case argued that EPA regulatory supervision of the

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state NPDES permit program was so pervasive that actions which were normally considered state actions were transformed into federal actions. 453 F. Supp. at 125. The court held that the issuance of an NPDES permit by the state under an approved program did not constitute an act which was federal in nature. The court said:

The fact that an area is subject to heavy federal regulation does not transform state actions in that area to federal actions for purposes of NEPA. EPA's main function in regard to a state NPDES program is the initial approval of the State program.

453 F. Supp. at 126.

In reaching its decision, the court relied heavily on the legislative history of the Clean Water Act. For example, the Conference Report on the 1977 Amendments states, with regard to state administration of the NPDES program, that:

[A] state program is one which is established under state law and which functions in lieu of the federal program. It is not a delegation of federal authority.

H.R. Rep. No. 95-830, 95th Cong. 1st Sess. 3 (1977), reprinted in U.S. Code Cong. and Admin. News, 4424, 4479 (1977).

Although the Chesapeake Bay decision concerned a construction of "federal agency action" under NEPA, it is reasonable to conclude that a similar construction would apply under the ESA for purposes of section 7. With both NEPA and the ESA, the threshold question is whether there is sufficient involvement by the federal agency to warrant compliance with the procedural requirements of those statutes.

Adopting the logic of the Chesapeake Bay case, we conclude that where an NPDES permit is issued by a state under an EPA approved state program, there is not sufficient involvement by EPA to constitute federal agency action for purposes of triggering section 7 consultation.

[Sgd.] J. Roy Spradley, Jr.

J. Roy Spradley, Jr.

Solicitor Docket
Div. Seven File (2)
SOL 77
SOL 77 Files
DEA 1b/10/21/81 x2172

Revised 11/24/81

Issue: Should the "biological assessment" requirement be dropped from the Act?

Appendix B - I.F.2.a., I.F.2.b.1., and I.F.2.b.5. Priority I

Discussion:

The requirement for Federal agencies to prepare biological assessments for actions subject to Section 7 of the Endangered Species Act was first introduced as subsection 7(c) in the 1978 Amendments. The new subsection required agencies to request, from the FWS and NMFS, information on listed and proposed species which may occur in the area of a proposed agency action. Should either Service advise the action agency that such species were present, the action agency was to prepare a biological assessment for the purposes of identifying any listed species which may be affected by the agency action. The assessment was to be completed within 180 days after its initiation and before any contract for construction was entered into or before construction was begun. No minimum time was established for completion of the assessment. In the statute it was suggested that the assessment could be undertaken as part of the agencies' compliance with NEPA. The information gathered during the assessment process was to be used by the agency to determine if their action created a "may affect" situation and warranted Section 7 consultation. Should consultation be required, this same information would be invaluable to the FWS in writing the biological opinion and making the determination as to the likelihood of jeopardy. Therefore, the biological assessment is a very valuable document.

It should be pointed out that the Act imposed this requirement "... any agency action for which no contract for construction has been entered into and for which no construction has begun on the date of enactment of the ESA Amendments of 1978 ..." Applying this requirement in its strictest sense would have required Federal agencies to prepare biological assessments on literally tens of thousands of small, environmentally insignificant actions. A review of the legislative history indicates that it was Congress's intent for this requirement to apply to major actions in an effort to fully examine project locations, in order to insure against any more "Tellico Dam situations," where an endangered species was discovered after the vast majority of the project was completed. Therefore, by proposed regulation, the FWS/NMFS adopted the NEPA standard and interpreted the biological assessment requirement to apply to agency actions which significantly affect the quality of the human environment, i.e., if an EIS is required.

In the draft regulations that were circulated for agency comment, the biological assessment requirement and specific criteria to be included in a biological assessment were explained. In an effort to fully inform the agencies of the types and kinds of information that the FWS/NMFS may need, a substantial section was added to the regulation which enumerated seven actions to be completed when conducting a biological assessment (copy

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Options/Evaluation:

A. Drop the biological assessment requirement. (Statutory Change)

Pros:

1. May shorten Federal agencies' compliance time with the Act.
2. May require less planning.
3. NEPA compliance may suffice.

Cons:

1. Eliminate data Federal agencies may need to determine "may affect."
2. May increase Service's consultation time due to need to gather additional data.
3. Affords less protection to listed species by not requiring Federal agencies to gather data which may be vital to species' conservation during the consultation process.
4. May create conflicts with partially completed projects.
5. May result in confusion by Federal agencies over who is responsible to gather data.

B. Retain the biological assessment requirement, but clarify its use, application, and content as revised in the latest version of the draft regulations. (Regulatory Change)

Pros:

1. Would relieve Federal agencies from having to gather unnecessary data.
2. Would provide the Service the data necessary to conduct consultations.
3. Enforces the relationship between NEPA and the Act.
4. Helps protect listed species.
5. Service and agencies would have data necessary to fulfill their respective roles.

Con:

1. Agencies may have some additional work to do on NEPA compliance.

Revised 12/30/81

Issue: Should "candidate species" be afforded some degree of recognition and consideration?

Discussion:

A considerable number of species have been identified as "candidates" for eventual designation as endangered or threatened. These are species that have been included in notices of review, been proposed for listing and withdrawn because of ESA's 2-year time limit, or been included in the Program Advice (most of these would have also been published in a notice of review or at least in the semi-annual agenda). Because of the length and complexity of the formal listing procedures now in force, many such species are likely not to be accorded recognition and full protection for some years, despite convincing evidence that such is warranted. In the interests of identifying possible or probable conflicts at the earliest stage possible, it has been suggested that some consideration be given of affording recognition to candidate species, presumably at a level lower than that accorded listed species. Several FWS Area Offices informally and regularly provide information on candidates during Section 7 consultation, and feel the procedure is very useful. Some Federal agencies have also instituted systems of consideration for candidates. Most notably, the Forest Service seeks to protect such species to such an extent as to obviate the necessity of their being formally listed. A breakdown of the number of currently identified candidates is attached as an appendix of this paper.

Options/Evaluation:

- A. Continue under present system, with only informal recognition of candidate category. (Status quo)

Pro:

1. Conserves consultation resources under Section 7.
2. Allows discretionary attention to be given candidates when serious probability of conflict is foreseen.

Con:

1. May allow some candidates to "fall through the cracks" and become extinct without being given consideration.
2. Federal agencies are not given any early notice of these species' presence.

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B. Give candidate species more recognition and consideration.

- B(1) Define the term candidate in the Act, formally recognizing this category. (Statutory change)
- B(2) Consider candidates under Section 7, by notifying agencies of their presence with no protection requirements (several Area Offices already do this). (Policy or Statutory change)

Pro:

1. Provides at least some degree of recognition for species that probably qualify for listing, but whose formal listing is delayed only because of administrative requirements.
2. Identifies potential conflicts between Federal projects and species conservation at an early stage in project planning, when minor modifications may remove potential for conflict.
3. May identify candidates for emergency listing if potential for irresolvable conflict is identified.

Con:

1. May make procedures under Section 7 somewhat more complex and time-consuming (however, many Area Offices are already operating under this system).

C. Grant specific authority and funding (very little funding is needed and then only in special cases) to enter into cooperative memoranda of understanding with Federal agencies and other entities to provide protection for candidates. (Statutory change)

Pro:

1. May provide considerable protection for substantial number of species thereby foreclosing the need to list and thus subsequent consultation.

Con:

1. Cannot provide protection as broad as that available pursuant to Sections 7 and 9.

D. Institute policy of advising consulting agencies of candidate species affected by projects in consultation, limiting definition of "candidate species" to high priority species pending proposals. (Policy change)

Pro:

1. Early notification to Federal agencies of a limited number of species.

Con:

1. Excludes the large number of vulnerable species which need recognition/protection but which may not be listed for some time.
2. May be misinterpreted as requiring protection for candidate species.
3. Some candidates may be excluded but later listed, e.g., through emergency listings.

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APPENDIX

Current Candidate Species (11/81)

Mammals	7
Birds	58
Reptiles	11
Amphibians	3
Fish	26
Snails	35
Clams	6
Crustaceans	13
Insects	61
Plants	
Category 1	1822
(Species with data indicating they probably should be listed)	
Category 2	1177
(Species which need more study before a listing decision is made)	

Revised 11/24/81

Issue: Should the Experimental Population concept be considered for the reintroduction of listed species?

Appendix B - C.2.c(2) Priority I

Discussion:

The Fish and Wildlife Service (FWS), through the Office of Endangered Species (OES), has increased the emphasis on the recovery of listed Endangered and Threatened species. This increased emphasis has resulted in the need to develop greater management options and flexibility for the Endangered Species Program.

Increased management alternatives for Endangered/Threatened species cannot be achieved without cooperation with the States and other Federal agencies; however, substantial and adequate recovery goes beyond cooperation. The FWS must also be in a position to utilize the resources and expertise available in State and Federal conservation programs. The Service has limited resources and is unable to fund and implement all recovery actions without assistance.

One of the most effective recovery measures is the reintroduction of a species into its historical range. However, this is also one of the most difficult recovery tasks to implement. States fear that stringent interpretation of the Act would alter or eliminate wildlife and land management options available in an area subsequent to reintroduction and are thus reluctant to give approval. The concern that the Service may use reintroduction to declare Critical Habitat as a justification to remove State control and prevent ongoing uses has also been raised. Federal agencies are reluctant to give approval for reintroduction because they fear delay, alterations, or postponements of ongoing or proposed actions.

It is obvious that if the present situation continues where no set policy is established to deal with these concerns and objectives, recovery actions may be severely hampered.

In some instances the Service has progressed as far as possible in recovery actions. Existing populations are at maximum levels in currently occupied habitat, or they exist only as captive species (in a captive propagation program) and need habitat for release. Without suitable habitat for release, recovery efforts cannot proceed.

These difficulties have resulted in the suggestion of an "experimental" category for reintroduced listed Endangered/Threatened species. This category would be utilized when reintroduction in historical range has been identified as a viable recovery alternative. Statutory or regulatory procedures for experimental populations can be developed to allow for greater management flexibility and to encourage participation by management oriented wildlife agencies at both the State and Federal levels.

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Comments Received:

Comments received from the States on this issue have been in support of the experimental population concept. New Mexico, for example, has been working with the FWS for over a year to develop a program for the reintroduction of several endangered fish species. They have expressed the belief that current approaches to reintroduction, such as with a Memorandum of Understanding, are too uncertain to consider. Therefore, New Mexico is advocating that the experimental population concept become an amendment to the ESA and has suggested specific changes. These have been incorporated in the example used to describe the Statutory Approach in the Appendix.

Initial discussion with our Regional Office staffs (Regional Offices have been in contact with State wildlife agencies) indicate that several species would benefit immediately from an experimental designation. These would include:

- Red wolf
- Whooping crane
- Masked bobwhite quail
- Woundfin
- Gila topminnow
- Pecos gambusia
- Colorado squawfish

A review of the red wolf situation illustrates how the experimental population concept can be utilized. Currently the Tacoma, Washington Zoo has a successful captive breeding program for the red wolf. In fact they have been so successful that they are rapidly running out of space to maintain all the animals. Currently their only option is to make any excess animals available to other zoos.

The Tennessee Valley Authority has expressed interest in receiving several pairs of the wolves from the Tacoma Zoo for release at TVA's Land-Between-the-Lakes environmental area. A draft management plan for this release has been developed by TVA and Regions 2 and 4 of the FWS. However, due to the restrictive nature of the endangered category, TVA is unwilling to accept the animals at this time. They insist on more management flexibility than is currently available for this species.

Unless the FWS can "loosen" restrictions adequately to accommodate TVA's management needs, the wolves will remain in the Tacoma Zoo and recovery of this species cannot proceed.

Options/Evaluation:

- A. The establishment of an experimental (reintroduction) category.
(Regulatory or Statutory change)

Pro:

1. Increasing the recovery potential for listed species by providing greater management flexibility.
2. Encourage the involvement of State and other Federal conservation agencies.

Con:

1. Increase in law enforcement difficulties. This involves the problems faced by law enforcement agents in distinguishing between the "endangered" population of a species and the "experimental" population. Since experimental populations would be managed, there is greater potential for take. The law enforcement agent would be put in a position of having to identify when "take" was legal (experimental populations) or illegal (endangered populations).
2. Complication of Section 7 responsibility. This involves the interrelationship of Sections 7 and 9 of the ESA. The question is whether the Section 9 "taking" prohibitions apply to Federal projects which have been the subject of a biological opinion that concluded no jeopardy. Also a blanket consultation on the reintroduction proposal cannot cover all possible impacts. Additional consultations may be necessary.

If the experimental population concept is to be developed, a decision must be made concerning the type of change (statutory or regulatory) the experimental category would involve.

A(1) Statutory Approach (see detailed description attached)

Pro:

1. Insures State involvement. Many of the comments received from the States (e.g., New Mexico) on the issue support a statutory change. By using this approach, the State will identify with the reintroduction as their issue and will be more likely to support the experimental population concept. This support will reinforce the FWS commitment to involve the States in the recovery process and additionally identify the FWS commitment on the recovery of E/T species.
2. Hold greater authority. An amendment to the Act will insure that the legal authority of an Act of Congress will be behind this recovery effort. The authority of a statute will add credence to the FWS commitment.

Con: None identified.

A(2) Regulatory Approach (see detailed description attached)

Pro:

1. Allows FWS to develop the concept without outside complication.

Con:

1. State resistance. Comments from the States have indicated that a regulatory approach is too "uncertain" for the States to consider. Since the States prefer the statutory approach, a regulatory approach cannot insure State support or involvement. For the experimental population to be a successful recovery effort, the FWS must have State support.
 2. Has not worked in the past. Regulatory options have been available to the FWS for several years. During that period of time frequent attempts have been made to develop experimental population management plans without success. This lack of success in the past indicates that continued emphasis on the regulatory approach is not likely to result in the recovery of E/T species.
 3. Increases the potential for legal challenge.
- B. Do not develop an experimental population category. Continue working with States, etc., within present constraints. (Status quo)

Pro: None identified.

Con:

1. Does not provide us with needed flexibility to accomplish recovery for some species.

Additional Information

A description follows giving examples of how the statutory and regulatory approaches could be implemented. Neither of these examples should be considered "foolproof" or complete. They serve here only to indicate the types of changes which will need to be considered for each approach.

Statutory Approach

A statutory change would require an amendment of the Act to establish a new category. This would result in considerable changes throughout the ESA. These changes could include:

Section 3(5)(D)-To describe how critical habitat will(or will not) be designated for experimental populations.

Section 3(22)-An explanation of the term "experimental population."

Section 4(a)-The factors for determination of experimental populations.

Section 4(b)(5)-Identification of the basis of determination of experimental populations and how critical habitat will(or will not) be determined.

Section 4(c)(1)-The need to establish a list of species with experimental populations.

Section 4(e)-Determination of the relationship between similarity of appearance and experimental populations.

Section 6(b)-The Secretary's and State's responsibilities under Management Agreements for experimental populations.

Section 6(c)-The determination of responsibilities under Cooperative Agreements.

Section 7(a)-Federal Agency consultation responsibility for experimental populations.

Section 9(a)-Identification of prohibitions.

Section 9(b)-Utilization of species bred in captivity as experimental populations.

Sections 10, 11-Identification of special situations which may occur in permit authority, enforcement, and penalties.

Section 13-Needed to give description of definition, listing, critical habitat, recovery planning, land acquisition, management agreements, cooperative agreements, consultation, international cooperation, prohibition, penalties, enforcement, and authority to qualify for funding for experimental populations.

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Regulatory Approach

1. Reintroduction activities must be specified in an approved recovery plan.
2. Reintroduction should be a priority 1 task in the implementation schedule of the recovery plan.
3. The recovery plan or management plan (this will be an appendix of the recovery plan and under the same review) must at least specify that for all reintroductions the following stipulations must be used:
 - a. No Critical Habitat will be determined in the area of reintroduction.
 - b. All reintroduction sites must be jointly agreed upon by all parties affected.
 - c. Vested rights of private, State, and Federal activities will not be unilaterally changed as a result of the reintroduction.
 - d. MOU's and cooperative agreements will be utilized to the extent feasible to assure protection to the species and the habitat at the reintroduction site.
 - e. Downlisting and/or delisting goals which are consistent with the recovery plan will be indicated from the outset of the project (downlisting/delisting cannot be guaranteed).
4. An up-front no jeopardy Section 7 consultation would be required prior to establishment.
5. Conduct the reintroduction/monitoring efforts.
6. Downlist if efforts are successful.
7. Consultation will only be undertaken for impacts not covered or anticipated in the up-front opinion.

Revised 11/24/81

Issue: Should ESA continue to afford protection to "lower life forms"?

Appendix B - I.B.2.d. Priority I

Discussion:

For purposes of this paper, "lower life forms" will include plants and invertebrates.

The 1973 ESA provides for equal legal protection of all life forms, including plants and invertebrates as Endangered or Threatened species. Although there have been few, if any, serious conflicts as a result of listing plants and invertebrates (the celebrated snail darter case, for instance, involved a "higher," i.e., vertebrate, life-form), the Act has occasionally been criticized for potentially halting major Federal actions in order to protect "weeds" or "bugs." Elimination of de-emphasis of protection for plant and invertebrate species under ESA could allow greater concentration of resources and effort on conspicuous vertebrates, especially large mammals and birds, whose conservation probably has the greatest public support.

Plants and invertebrates, including rare species, have been vital in elucidating important scientific principles in genetics, evolution, ecology, biochemistry, and other fields. Native Hawaiian insects, including rare species of the genera *Drosophila* and *Scaptomyza* have been important subjects in genetic and evolutionary research. Some plants now candidates for listing are of significant potential usefulness in breeding crop plants with greater resistance to disease or environmental conditions, or are themselves potential crop plants (e.g., several candidate species of *Limnanthes*, or meadow-forn, which produce unusual seed-oils).

Biologically, it makes sense to treat all taxonomic groups equally or even to place some special emphasis on protecting plants and invertebrates, since they form the bases of ecosystems and food chains upon which all other life depends. Without such "support systems," the survival of more conspicuous vertebrate life forms, whose protection may be more generally supported by the public, becomes more tenuous. Given the Act's stated purpose of conserving ecosystems, it is difficult, if not impossible, to justify disregard for any of the taxonomic groups of which such systems are composed. It has been suggested, however, that, in a situation of limited program resources, if priority were given wide-ranging vertebrate species, other, more local and obscure species might benefit through a sort of "umbrella" effect. The scientific validity of this approach is open to serious question in that conservation measures directed toward conspicuous species without taking account of the needs of less conspicuous species with which they share habitat may not achieve the Act's purposes of ecosystem protection. There is danger of such an approach leading to a "zoo" syndrome, in which attractive species are maintained through intensive management, while ecosystem vitality is largely ignored.

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FWS is considering a priority system for listing and recovery activities that gives strong preference to vertebrate life forms. Previous systems have essentially ignored such taxonomic weighting, emphasizing instead degree of threat, potential recoverability, and genetic uniqueness as reflected by taxonomic rank.

There appears to be a "gut feeling" in some quarters that vertebrates are more important than plants and invertebrates in ecosystem conservation, but on examination, this is questionable. As an example, the loss of peregrine falcons (a "higher" form) from the eastern U.S. in this century has had a negligible effect on eastern ecosystems, while the virtual elimination of the American chestnut (a "lower" form) from approximately the same area over roughly the same time period has had significant effects on wildlife habitat in virtually all forested ecosystems of the eastern States and has resulted in loss of a significant economic resource. Can we reasonably say that the peregrine is more important than the chestnut?

Comments Received:

Several comments have addressed the need to treat plants and invertebrates differently than vertebrates under ESA, citing a need to allow for the supposed great number of subspecies in these groups and the probable natural extinction of such subspecies (in fact, plants and invertebrates are no more likely than vertebrate species to comprise recognized subspecies). Several other comments strongly supported the retention of protection under the Act for plant and invertebrate groups. Several comments supported institution of taking controls for plants (see separate paper on this topic, Priority II, Issue 9). No comments were received advocating total elimination of protection for plants or invertebrates.

Options/Evaluation:

- A. Retain protection for "all" life-forms under ESA (with no taxonomic priority). (Policy Change)

Pros:

1. Avoids criticism from groups supporting protection for plants and invertebrates.
2. Is consistent with U.S. obligations under CITES, and Endangered Species legislation in a number of other countries, e.g., United Kingdom, West Germany, Sweden, etc.
3. Provides protection to organisms of potential scientific and practical value.
4. Supports integrated approach to protecting ecosystems by affording adequate consideration of all organisms within them.

Cons:

1. Leaves ESA open to criticism as being overly protective of inconspicuous species (this may be equally true in the case of some "higher" forms, such as the snail darter).
 2. May divert resources and effort away from some species whose conservation has strong public support.
- B. The FWS will administratively assign greater priority to listing and protecting "higher" life forms than "lower" life forms, due to budgetary constraint. (Status quo)

Pros:

1. Agrees with priority systems currently being considered for adoption.
2. Allows FWS to devote efforts and resources to those species whose conservation has greatest public support.
3. If "umbrella" theory is correct, may incidentally provide protection for low priority or unlisted "lower" life forms.

Cons:

1. Requires fundamental alteration of former even-handed approach to species of all groups.
 2. Is likely to provoke negative reaction from the scientific community, native plant societies, invertebrate conservation groups, horticultural groups, and the environmental community.
 3. May allow loss of organisms of potential scientific and practical value.
 4. Rests on dubious scientific basis that "higher" life forms are in some way more important.
- C. Reduce protection under ESA for plants and invertebrates in the following ways: (Statutory Change)
- C(1) Provide discretion to or require that listed plants and invertebrates be exempted from Section 7.
 - C(2) Provide limited protection under Section 9 to invertebrates, possibly similar to how plants are treated now (separate paper on plant-taking prohibitions).

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Pro:

1. May allow minimization of certain conflicts regarding affected species.

Con:

1. May lead to loss of listed species because an obvious means of protecting them has been disallowed.

- C(3) Prohibit listing of plant and invertebrate taxa at rank lower than species (see also separate paper on populations and subspecies, Priority I, Issue 3). (Statutory Change)

Pros:

1. Allows greater concentration of resources on conspicuous vertebrates.
2. Concentrates efforts on most significant plant and invertebrate genetic resources.

Cons:

1. Opens issue of what is a species as opposed to a subspecies, which may be of considerable significance, given variation of taxonomic treatment in some groups.
2. May require protection of an entire species when only one of its subspecies actually qualifies for listing, if that subspecies occupies a significant portion of the range of the species as a whole.

- D. Eliminate all protection under ESA for plants and invertebrates. (Statutory Change)

Pros:

1. May allow greater allocation of resources and effort to species with greatest popularity (some "higher" forms, however, are less popular, e.g., rodents, some fishes, reptiles, than some "lower" forms, e.g., orchids or butterflies).
2. Avoids criticism that protecting "weeds" or "bugs" is interfering with accomplishment of national goals.
3. If "umbrella" theory is valid, may provide incidental protection for unlisted "lower" life forms.

Cons:

1. Is likely to provide substantial negative reaction by the scientific community, native plant societies, invertebrate conservation groups, horticultural groups, and the environmental community.
2. May allow the loss of organisms of great potential scientific and economic value.
3. May be self-defeating, in that loss of "lower" forms could jeopardize existence of "higher" forms which depend upon them.
4. Is not supportable on scientific grounds. Biologists do not ordinarily distinguish between more important "higher" forms and less important "lower" forms.
5. Requires FWS to walk away from species that now constitute a substantial proportion of program (e.g., plants now comprise the second largest group of listed domestic species).

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LISTING PRIORITY SYSTEM

Degree of Threat				
High	No field work needed	Mammals	Species	1
			Subspecies	2
		Birds	Species	3
			Subspecies	4
		Fishes	Species	5
			Subspecies	6
		Reptiles	Species	7
			Subspecies	8
		Amphibians	Species	9
			Subspecies	10
		Vascular Plants	Species	11
			Subspecies	12
		Insects	Species	13
			Subspecies	14
		Molluscs	Species	15
			Subspecies	16
		Other plants	Species	17
			Subspecies	18
		Other invertebrates	Species	19
			Subspecies	20
	Field work needed	Mammals	Species	21
			Subspecies	22
		Birds	Species	23
			Subspecies	24
		Fishes	Species	25
			Subspecies	26
		Reptiles	Species	27
			Subspecies	28
		Amphibians	Species	29
			Subspecies	30
		Vascular Plants	Species	31
			Subspecies	32
		Insects	Species	33
			Subspecies	34
		Molluscs	Species	35
			Subspecies	36
		Other plants	Species	37
			Subspecies	38
		Other invertebrates	Species	39
			Subspecies	40

NOTE: Priority rankings 41-120 repeat the sequence of rankings 1-40 within the "medium" and "low" degree of threat categories.

Revised 11/24/81

Issue: How should hybrids be treated?

Appendix B - Issue B.2.g. Priority II

Discussion:

The treatment of hybrids under the Act involves two issues: (1) whether hybrid populations deserve protection because of their biological importance, and (2) whether hybrid specimens should be subject to the prohibitions of the Act in order to enable effective enforcement of prohibitions for full species.

There are cases where hybrids may form stable populations in nature, as "incipient species." They have considerable scientific interest and possibly have evolutionary significance. Such stable hybrid populations may deserve protection under the Act as if they were a species. On the other hand, hybrid populations may arise because two species have been brought into contact through human activity. Where this occurs in the wild, it may be necessary to eliminate hybrids in order to protect the original species from being swamped or displaced by a more successful form.

In most cases, however, hybrids arise through captive breeding. They have little biological importance in themselves, but the depletion of gene pools of the full species for captive production of hybrids could be a problem. Here, the need is protect the parent species rather than the hybrid.

The enforcement issue centers on the difficulty of distinguishing hybrid specimens (or specimens claimed to be hybrids) from specimens of a protected species. The import trade in crocodilian leather goods has exploited this difficulty by claiming that goods are from hybrids and thus are exempt from the Act's prohibitions.

CITES parties have addressed these issues in a resolution to the effect that stable, wild populations of hybrids may be specifically listed in the appendices, and that the controls of CITES apply to a hybrid if one or more of its (immediate) parents is a listed species.

Comments Received:

The Service received no comments on this issue in relation to the present review. However, it was the subject of considerable public discussion during preparations for the second meeting of CITES parties at San Jose. That discussion led to a U.S. proposal which the parties adopted. The parties agreed that populations of hybrids may be specifically listed in the appendices if they form stable, wild populations of individuals that interbreed when mature. The parties also agreed to address the enforcement and gene pool depletion problems by treating the immediate offspring of an individual of a listed species as if they are listed. Where offspring result from a cross between parents listed on different appendices, they are afforded the most protective treatment.

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Options/Evaluation:

A. Should hybrid populations be protected because of their biological importance?

A(1) List stable, naturally occurring hybrid populations as "species."
(Policy Change)

Pro:

1. Enables protection for endangered hybrid populations.

Con:

1. Might draw conservation efforts away from other full species of higher priority.

A(2) Treat hybrid populations as part of one or both of the parent species, which would afford them protection if one or both parent species were listed as endangered. (Policy Change)

Pro:

1. Avoids need for listing action to protect hybrids.

Con:

1. Might require protection for hybrids when the parent species are better conserved by destroying hybrids.

A(3) Avoid listing hybrid populations and do not protect them under the listing of their parent species. (Policy Change)

Pros:

1. Eliminates directing limited resources at conservation of hybrids.
2. Allows the destruction of hybrids in order to protect pure strains of endangered species.

Con:

1. Might not allow listing and protection for endangered hybrid populations of biological importance.

B. Should hybrids be subject to prohibition of the Act to address enforcement problems?

B(1) Continue current policy under which hybrid populations are exempt from the Act's protection. (Status quo)

Pro:

1. Enables destruction of hybrid populations to preserve pure strains of endangered species.

Con:

1. Allows detrimental trade in endangered species if the Service is unable to determine that specimens being traded are not hybrids, as argued by importers.

- B(2) Adopt policy that hybrids should be listed under similarity of appearance provisions. (Policy Change)

Pro:

1. Enables the Service to control trade in specimens of "hybrids" when they are likely to be specimens of full endangered species.
2. This approach is largely consistent with that of CITES.

Con:

1. Questionable authority to list in this manner.

- B(3) Establish rebuttable presumption in the Act that specimens are of a listed species, shifting the burden of proof from the Service to the defendant or respondent to demonstrate that the specimen is a hybrid. (Statutory Change)

Pros:

1. Greatly simplifies the complex problems for Law Enforcement in identification of specimens.
2. Deals effectively with problems raised when importers try to avoid prohibitions by claiming specimens to be hybrids when they are actually endangered species.
3. Does not conflict with CITES.

Con:

1. Importers might argue that placing the burden of proof on them is unfair. This would occur, however, only where there are real problems in identifying specimens.

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Revised: 11/27/81

REAUTHORIZATION/REGULATORY REVIEW OF THE ESA
Cooperative AgreementsIssue: Technical Amendments to Section 6 of the ESA.Priority: 2, Number 3 (Appendix I.E.2.)

Discussion: Section 6 of the Endangered Species Act authorizes the Secretary to enter into a cooperative agreement with any State that establishes and maintains an adequate and active program for the conservation of endangered and threatened species of fish, wildlife and plants resident in the State. The legislative history of the 1973 Endangered Species Act indicates that Congress viewed the Cooperative Agreement Program as a fundamental part of the nation's efforts to conserve endangered and threatened species. The sharing of responsibility for conservation has always been of prime importance to the States. Most States now have cooperative agreements with the Department.

Section 6 establishes a separate cooperative agreement program for both animals and plants. Furthermore, there are two types of plant or animal cooperative agreements available to the States, the agreements differing in the scope of their coverage and eligibility requirements. Therefore, there are four related but distinct cooperative agreements available under Section 6: (1) a "full authorities" cooperative agreement for fish and wildlife; (2) a "limited authorities" cooperative agreement for fish and wildlife; (3) a "full authorities" cooperative agreement for plants; and (4) a "limited authorities" cooperative agreement for plants.

Full and limited authorities cooperative agreements differ in the conservation authorities criteria required to qualify for each. There are also some differences in the conservation authorities required for wildlife and plants.

To qualify for a full authorities cooperative agreement for fish and wildlife, a State must meet the following criteria:

- (1) the State agency handling conservation matters ("the relevant State agency") must have authority to conserve all resident species of fish and wildlife determined by the

State agency or the Secretary to be endangered or threatened;

(2) the relevant State agency must have established acceptable conservation programs for all resident species of fish and wildlife determined by the Secretary to be endangered or threatened;

(3) the relevant State agency must have authority to conduct investigations to determine the status and requirements for survival for resident species of fish and wildlife;

(4) the relevant State agency must have authority to establish programs, including the acquisition of land and/or aquatic habitat or interests therein, for the conservation of resident endangered or threatened species of fish or wildlife; and

(5) provision is made for public participation in designating resident species of fish and wildlife as endangered or threatened under the State program.

A limited authorities agreement for fish and wildlife is less extensive and does not require compliance with all five criteria. The relevant State agency must have the authority to conduct investigations and acquire land or aquatic habitat, or interests therein, as described in numbers (3) and (4) above. There must also be provision for public participation as discussed in (5) above. The primary difference between a full and limited authorities agreement is that for a limited agreement, the relevant State agency need not have authority to conserve all resident species listed by the State or the Secretary; neither must the State have a conservation program for all federally listed species. Rather, in a limited authorities agreement, the State and the Service must mutually agree on which species of fish and wildlife listed by the State

or the Secretary are most urgently in need of conservation programs. In addition, they must agree on plans whereby immediate attention can be given to these species.

The Cooperative Agreement Program for plants is similar in most respects to that for animals. The major difference relates to land acquisition authority requirements.

To qualify for a full authorities cooperative agreement for plants, a State must meet four criteria:

- (1) the relevant State agency must have authority to conserve resident species of plants determined by the State agency or the Secretary to be endangered or threatened;
- (2) the relevant State agency must have established acceptable conservation programs for federally listed plant species;
- (3) the relevant State agency must have authority to conduct investigations to determine the status and survival requirements of resident plant species; and
- (4) provision must be made for public participation in designating resident plant species as endangered or threatened.

The criteria, then, are the same as those applicable to a full authorities agreement for animals with the exception that for a plant agreement, the relevant State agency need not have authority to establish programs including the acquisition of land or aquatic habitats or interests therein. Furthermore, since there are no taking prohibitions under the Federal Act with regard to plants, criteria number 1 above has not been interpreted as requiring that such a prohibition be provided by the State.

To qualify for a limited authorities cooperative agreement for plants, a State must meet the investigations authority and public participation criteria described above. In addition,

the State and the Service must reach agreement on species of plants most urgently in need of conservation programs and on plans under which immediate attention can be given to such species.

As noted above, the Cooperative Agreement Program has been highly successful, with most states participating. The major problem now existing with the Program is lack of funding. This is the source of considerable criticism from the States. In addition, parts of section 6 have proven to be confusing to the States and should be clarified in the ESA reauthorization.

Comments:

States that commented on section 6, for the most part, requested that funding be resumed for the Cooperative Agreement Program. In addition, the Assistant Secretary for Indian Affairs recommended that assistance be provided to tribal wildlife agencies, as well as States, for conservation of wildlife and suggested that, at present, States have no authority to administer a cooperative agreement program within Indian reservations.

Evaluation of Recommended Clarifications:

The following parts of section 6 should be clarified:

(1) In both section 6(c)(1) and (2), the language is confusing as to the requirements and differences between the full and limited authorities agreements. It is suggested that the subsection be redrafted so as to place the requirements of each type of agreement in distinct and clearly marked sections.

(2) Section 6(c)(1)(D) requires that the State have authority to establish conservation programs including land acquisition. It has never been clear what is meant by the term "program" here. The Solicitor's Office has interpreted this criteria to simply require the State to have authority to acquire lands, aquatic habitat or interests therein. It is recommended that the part be revised to eliminate the reference to "programs" and simply state that the above-cited land acquisition authority is required.

(3) For limited authorities agreements for fish and wildlife and plants, section 7 presently requires States to have authority to investigate the status and survival

requirements for all resident species. A State generally opts for a limited authorities agreement because it does not have authority to conserve all resident species. This being the case, some States have been prevented from entering into even a limited authorities agreement because they do not have the authority to investigate the status of all resident species. Since a limited authorities agreement is limited to certain agreed upon species, it is recommended that the investigative authority requirement also be so limited.

Options for Other Issues:

Two other issues have arisen concerning the Cooperative Agreement Program. The first concerns the adequacy of State law enforcement authorities required for eligibility for a cooperative agreement. The second concerns the applicability of section 6 to Indian tribes.

(1) The concept of conservation authority, as utilized in sections 6(c)(1)(A) and 6(c)(2)(A), is not clearly spelled out in the Act. A memorandum dated April 28, 1977, by the Assistant Solicitor for Fish and Wildlife clarified the concept as it relates to fish and wildlife. This interpretation has worked well, with few problems being presented for the States. Another opinion by the Assistant Solicitor, dated April 9, 1980, interpreted section 6 requirements for plant cooperative agreements. One problem not completely resolved in that memorandum concerned the law enforcement authorities required for a State's conservation program for plants.

Adequate conservation authority requires adequate law enforcement authorities. State law enforcement authorities are judged by comparison to the law enforcement authorities granted the federal government in the ESA. The Act grants the federal government authority only to regulate interstate and foreign commerce in plants, not takings. Since the States have not been required to possess greater law enforcement authority than that granted under the ESA to the Federal government, the States have not been required to have authority to control takings of plants. Beyond this, though, it is not clear what law enforcement authorities can be required of the States in determining whether they qualify for a cooperative agreement for plants.

Since under the Constitution the States generally must act cautiously when they regulate interstate trade, this has not been mandated in order to get an approved cooperative

agreement. The issue then is whether the ESA can be interpreted as requiring the States to regulate intrastate trade in endangered and threatened species of plants. If the ESA does not reach this far, the issue becomes what law enforcement authorities are left which can be required of a State. That is, since the States are not required to protect listed plant species from takings, the only other major law enforcement protection stems from the regulation of trade. The legislative history of Section 6, however, provides no guidance at all as to whether a State should be required to regulate intrastate commerce, interstate commerce, or neither, in order to satisfy the eligibility criteria that it have conservation authority for plants.

There are several options that should be considered here:

(A) Leave the situation the way it presently exists.

Pro: Avoids expenditure of resources on statutory revisions concerning an issue that has not in the past created frequent substantive problems.

Con: Fails to clarify a provision that potentially can cause problems with the States.

(B) Amend the ESA to require State authority to control intrastate commerce in endangered and threatened plants.

Pros:

1. Clarifies ambiguousness in the present Act.

2. Assures control over intrastate commerce in plants, which the federal law cannot reach.

Con: May be too onerous a burden to impose on the States for the few plants that need commercial control.

(C) Amend the ESA to require State authority to control takings of plants.

Pros:

1. Clarifies ambiguousness in the present Act.
2. Assures protection for plants from taking, presently unavailable in the ESA (see option paper on plant taking provisions).
3. Takes advantage of court decisions allowing broad State police power over private lands, such power being questionable in regard to federal authority.

Con: May be too onerous a burden to impose on the States, many of which do not presently have taking provisions for plants.

(D) Amend the ESA to expressly require no law enforcement authorities for plants.

Pros:

1. Clarifies ambiguousness in the present Act.
2. Would eliminate one requirement that the States have to meet for a cooperative agreement.

Cons:

1. Would lessen State protection for plants.
2. May be viewed as rendering limited authorities agreements for plants meaningless.

(2) The second issue was raised by the Assistant Secretary for Indian Affairs. At present, Indian tribes are not included in the definition of "state" under the ESA. Therefore, they are not eligible for cooperative agreements under section 6. The Assistant Secretary for Indian Affairs recommended that the statute be changed to allow for the provision of some assistance to Indian tribes in conserving wildlife on their reservations. The options to be considered, then, are:

(A) Leave the situation as it presently exists.

Pros:

1. Avoids controversy with States, who will probably oppose the alternative.
2. Avoids the expenditure of resources in attempting to get a statutory change that may not add a great deal to the protection of endangered and threatened species.
3. Avoids problem of deciding which Indian tribes would qualify as a "state" for purposes of a cooperative agreement.

Cons:

1. Ignores tribal governing units that are in many other ways treated as sovereign entities by the federal government.
2. May add to the protection of listed species resident on Indian reservations.

(B) Amend the ESA to include Indian tribes in the definition of "state" for section 6 purposes.

Pros:

1. Is consistent with other instances in which the federal government treats Indian tribes as sovereign entities.

2. May add some protection to those species resident on Indian reservations.

Cons:

1. Would likely create controversy with the States.

2. May not be worth the effort for what may be a small amount of additional protection for endangered and threatened species.

3. May create a problem in determining which Indian tribes qualify as "states".

Revised 11/24/81

Issue: International Convention Advisory Commission (ICAC) - retention or changes.

Appendix B - G.2.b. Priority I

Discussion:

The 1979 amendments of the Endangered Species Act abolished the Endangered Species Scientific Authority and transferred that authority to the Secretary of the Interior, the Fish and Wildlife Service. A new organization, called ICAC, was created to advise the Secretary primarily on scientific matters relating to CITES. The Endangered Species Scientific Authority was an interagency committee composed of six Federal agencies and the Smithsonian Institution. It had an Executive Secretary and a small staff. It claimed not to be responsible to the guidance of any Federal agency, and it had a tremendous impact on the management of a number of native species. When it was abolished and the ICAC was established, virtually the same staff that had served the Endangered Species Scientific Authority was moved to the ICAC. The ICAC continued as an interagency committee, with the addition of one member representing the State fish and game agencies, and the deletion of one of the Federal agencies. The Department has decided not to fund the staff of the ICAC, and as of this fiscal year, ICAC no longer has any staff. There have been a number of questions raised about its effectiveness and the necessity of continuing it.

Comments Received:

Three States, Idaho, Michigan, and Tennessee, commented on this issue. Idaho and Michigan recommended revocation of the authority of ICAC. Tennessee recommended replacement of the members of ICAC with responsible members of the State wildlife agencies and industries. The Wildlife Legislative Fund of America commented that the conservation community was disappointed with ICAC's performance and that a number of groups had recommended the abolition of ICAC. The IAFWA specifically recommended abolition of ICAC with possible expansion of the Scientific Authority's mandate to accommodate some of the commission responsibilities.

Options/Evaluation:

A. Remain neutral on the issue.

Pro:

1. The retention of ICAC may be important to some environmental organizations who see it as an important balance to the FWS.
2. ICAC never really provided independent scientific advice, and without staff it can no longer be realistically involved in policy issues.

3. It is likely that the matter will be raised in Congress by IAFWA, and will be resolved without DOI input.

Con:

1. The States (IAFWA) probably expect our support.
 2. The Department's decision not to fund staff for ICAC will probably be interpreted as a position favoring ICAC's abolition.
- B. Remain neutral on issue unless asked by Congress, then favor abolition.

Pro:

1. Does not commit DOI early to a move which may be resisted by environmental groups.
2. Many of the useful functions performed by ICAC are already being taken up elsewhere. For example:
 - (a) LE is continuing the monitoring of imports and exports;
 - (b) OSA is reviewing draft questionnaires for permit applicants;
 - (c) WFO gets continuing input from all involved Federal agencies through the Management Authority Contact group. (This group meets monthly and covers species and non-species CITES issues);
 - (d) Public input on CITES positions is guaranteed by regulation;
 - (e) Public input on permit applications which are also endangered species is guaranteed through notice in the Federal Register.

Con:

1. A move to abolish ICAC might lead to a compromise which is less acceptable than the status quo.

Revised 11/24/81

Issue: Effect of CITES on the States/Bobcat

Appendix B - G.2.d.e. Priority I

Discussion:

Several species native to the United States were included in the CITES coverage in 1976, under broad listings of entire families of species. These are the bobcat, lynx, and river otter. The exercise of Federal authority over the exports of these species, and the manner in which it began, have given rise to a very strong political resentment by the States. Initially, the Endangered Species Scientific Authority felt that the information available on these species was insufficient to make a finding of no detriment and it proposed a complete ban on the export of bobcat. After discussions with the States, exports were allowed during the first year of control by the Federal Government (1977) on a quota basis. This was followed by the institution of a system in which the Federal Government, again the Scientific Authority, reviewed State management programs for these species, and if it found that the State had an adequate management program, it would allow export without limitation.

Many States did not possess adequate legislative authority for management of these species. They were forced by Federal action to adopt appropriate legislation and to set up management programs where those did not already exist. The bobcat was considered a pest in some States. The States contend that none of these species were appropriate for listing under CITES, and should be removed from the CITES list. In the meantime, the listing of these species and the subsequent Federal controls have caused a great deal of irritation between the States and the Federal Government, and have led the States to resist other international commitments by the United States which might affect their management of resident species. On the other side of the issue, the Defenders of Wildlife have consistently charged that the Service has not done enough to protect bobcat populations through these Federal controls. In fact it sued the Department to invalidate Scientific Authority findings on bobcat exports. The District Court has placed an injunction on exports for the present harvest year until the Scientific Authority can show that it is basing findings on reliable population estimates. This case was appealed to the Supreme Court, which decided not to hear the matter.

The conflict created between the States and Federal Government on the one hand and the Federal Governmental and the environmental community on the other hand has become a very significant issue regarding the United States' role in international wildlife conservation, and more generally in the relationship between the States and the Federal Government on wildlife matters. Although we get feedback from staff members of State conservation agencies that they are not unhappy with the present system, which has resulted in the institution of management programs for bobcats in virtually all the States where they exist, the issue remains a serious political problem between the States and the Federal Government. It is extremely

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likely that the IAFWA and the States will push very hard for a statutory amendment to cure this problem. It is just as likely that there will be concerted opposition on the part of the environmental groups to any such move.

Comments Received:

The Department has received comments from 15 States on this issue, all of which demand some change to the present situation. In addition, there is one comment from a representative of the trapper and fur industry, a comment from Region 4 regarding the beneficial effects of CITES controls for the conservation of alligators in Louisiana, a comment from the State Department that simply says that any changes in the Act should not alter international obligations of the United States, and a comment from a private citizen favoring the listing of the bobcat as an endangered species and its movement to Appendix I of CITES (which would allow no commercial trade at all). The Department also received a summary of a survey carried out by the International Association of Fish and Wildlife Agencies (IAFWA) in which 31 agencies of the States responded on 34 separate issues. Of all these responses, the impact of CITES on State management of fish and wildlife was considered one of the major problems and was listed 11 times. More recently, the IAFWA has adopted a series of recommendations relating to the impact of CITES on State management. They are, first, an amendment to the Act which would overcome the effect of the recent Court of Appeals case mentioned above; second, the adoption of an amendment that would bind the Scientific Authority to the management decisions of the States regarding resident fish and wildlife; third, a requirement in the Act that whenever a resident species was proposed to be listed on CITES, and was not already listed as an endangered or threatened species, that the United States be required to take a reservation from that listing; fourth, the establishment of Scientific Authority findings on a 5-year basis rather than the present annual basis.

Many of the State comments also included the concept that the States have a much more active role in the process of listing and determining other positions under CITES, and the negotiation of other international agreements which might affect State management of resident species. The States currently have a very large role in listings which is encouraged by FWS.

Options/Evaluation:

- A. No change in the statute, but streamline present procedures. Streamlining would involve the making of Scientific Authority findings on a multivear basis, and the earlier issuance of annual findings. We have already combined the findings required by the Scientific Authority and the Management Authority in an effort to clarify and simplify these procedures. (Policy change)

Pro:

1. Satisfactory to environmental groups which would oppose any "lessening of protection" for the bobcat and other species.

2. Minimizes internal administrative and international actions required by other options.
3. Retains in place present State management systems for bobcats and other species, which many State staff biologists indicate is appropriate.

Con:

1. This administration apparently has committed itself to resolving the issue by stronger means than administrative streamlining. In particular, the work on a proposal to delist the bobcat from CITES indicates Federal dissatisfaction with the status quo.
 2. Even if we should be successful in removing the bobcat from CITES, the listings of other species will fall into the same category so the problem must still be resolved.
 3. Maintaining the status quo will not resolve the "ill will" that has been generated between this agency and the States over wildlife management.
- B. Remain neutral and leave the IAFWA and the environmental groups to fight out the issue in Congress. (No action)

Pro:

1. This will not offend those environmental groups which feel that the bobcat should remain listed and protected at the Federal level.

Con:

1. As stated above, the administration appears to have already indicated that it favors a stronger resolution of the issue, and thus must keep the political "faith."
 2. It is likely that there will be some amendments relating to this issue and since this Department has a vested interest in assuring that whatever language is adopted is appropriate and feasible, we should become involved early in the process.
- C. Take the lead in proposing statutory amendments which delegate the entire responsibility for management of resident species listed under CITES to the States. (Statutory change)

Pro:

1. This would be seen as direct, forceful action which would alleviate much of the criticism by the States.
2. This would appreciably reduce the workload burden on both the Scientific Authority and the Management Authority.

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Con:

1. A complete delegation of responsibility to the States would raise problems of lack of coordination in making scientific determinations. A State which is stricter than its neighbor would likely find pelts being "smuggled" into the neighboring State for tagging and approval under that State's program.
 2. Delegation of the permit issuing function of the Management Authority would significantly increase the difficulty of obtaining permits for exporters. Export is normally done through several of the major ports, by persons several steps down the chain of commerce from the original trappers or buyers. The present "Letter of Authorization" system operated by WFO gives these people permits for legally tagged hides without delay. If such permits were issued by the States, a buyer would have to go to that State, or to several States if the export batch was made up of pelts from more than one State.
 3. The lack of Federal coordination on the mechanics of permit issuance might lead to the development of State permits which were unacceptable by other Management Authorities, and imports of CITES species into other countries would be refused (CITES requires that the permit be issued by a national Management Authority; Canada employs a system whereby each province is named as a Management Authority for the issuance of those permits, uniformity is maintained through regular meetings of the Canadian Federal and Provincial Officials; such a system would be much more difficult with the greater number of States involved in this country).
 4. There is some question as to the constitutional legality of this under the treaty.
- D. Amend the Act to incorporate standards for Scientific Authority findings which would overcome the effect of the District Court case. (Statutory change)

Pro:

1. This would deal directly with the primary problem of the moment.
2. It would alleviate State fears that the standards announced by the District Court would be applied to other wildlife management.

Con:

1. Any such standards would probably be subject to dispute over their interpretation, leading to further court cases tying up exports.

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2. This approach would not further the "partnership" concept with the States.
- E. Declare the bobcat to be listed for "control" purposes and make a one-time finding allowing their export if properly identified. (Policy change)

Pro:

1. This would alleviate the need for Scientific Authority findings regarding detriment to the species.
2. This sidesteps the issue of writing standards which overcome the standards expressed in the District Court case.
3. This might be able to be accomplished by publication of a notice in the Federal Register.

Con:

1. If this option is carried out by a Federal Register notice, it might be subject to challenge in the courts for lack of compliance with the District Court finding.
 2. While there is no set procedure for this under CITES, the U.S. has established a precedent of requiring international concurrence for such a declaration. If we try to obtain such concurrence at the next Conference of the Parties, it might be defeated; and, if we do not attempt to obtain international concurrence, the precedent we have set would probably be used against us in any court case.
- F. Amend the statute to establish a joint Federal-State system in making no detriment findings on this or a similar species. This approach would go as far as possible identifying State/Federal roles. Amendments could include the following matters: (Statutory change)
- Recognition of the authority to make no detriment findings on a general basis for a given species, as opposed to making such findings for each export transaction.
 - Recognition that no detriment findings may be made on a State-by-State basis relying on State management programs.
 - The basic criteria for determinations should be the best available evidence and the application of appropriate principles of wildlife and plant management.
 - The Federal role would be limited to determinations as to acceptable State management programs, based on general criteria set out in the statute itself. This would be similar to the procedure already in use for approval of Section 6 cooperative agreements, and would include the existence of statutory and regulatory authority over the species

in question, the existence of an administrative office capable of carrying out such a program and the existence of management programs including harvest seasons, limitations on the harvest, and tagging or marking systems where appropriate.

- Once a State had an approved State management program, this would be deemed to be a finding that the exploitation was not detrimental to the survival of the species and that the role of the species in its ecosystem had been properly considered.
- The issuance of CITES permits by State governments could be authorized, so that the system could be utilized wherever feasible.
- The statute could provide for a council of State representatives from each of the major regions of the country to assist the Service in developing positions for CITES conferences.
- When a species is determined to be a "control" species, the statute can specify that a no detriment finding shall consist of the determination that the specimens are adequately identified in an appropriate manner to distinguish them from other listed species. This should be subject to an exception that, in a case where a positive showing is made that the trade in a "control" species is in fact having a detrimental effect on the control of trade in other CITES species, further export controls can be required as a condition of a no detriment finding.

Pro:

1. These statutory recommendations should meet most of the objections of the States by overcoming the District Court decision, by changing the nature of the no detriment finding on "control" species, and by effectively delegating to the States the authority for no detriment findings.
2. This retains the benefits of the Federal role in coordination and oversight of State programs, assuring environmentalists, among others, that State management programs are adequate and appropriate.
3. This approach avoids the difficulty of trying to write biological standards into the statute.
4. This would involve the States in general policy making under CITES as well, which was requested by a number of State commenters.
5. Since it may prove difficult to delist the bobcat or other resident species, these amendments offer another way out.
6. This would be a major statutory declaration of the partnership role of the State and Federal Governments in wildlife management.

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Con:

1. There are a few differences in administrative practice between these changes and the present system. However, these amendments would overcome the District Court opinion.
2. A Federal role in the development and approval of State management programs is retained. While this should please many environmental groups, it may not go far enough for a number of the States.
3. Some of these points may prove expensive to undertake.

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Revised 11/24/81

Issue: Definition of Import

Appendix B - I.B.2.e., I.H.2.i., and I.H.2.j., Priority II

Discussion:

Origin SOL. Some people in SOL believe that the conflict between the prohibitions of the Act and the import provisions of the CITES should be eliminated. This is a controversial issue since stricter domestic legislation is allowed by CITES. The U.S. presently has stricter domestic legislation to prevent the U.S. from being a conduit for endangered species. The SOL has taken various approaches, one being a change in the definition of "import."

One of the primary purposes of the Act is to provide protection for the species of fish, wildlife and flora that are threatened with extinction. One method of doing this is to reduce commerce in such species and thereby enhance its chances of survival.

To further a reduction in commerce, the U.S. prohibits the importation of endangered species into the U.S. except for purposes of propagation and enhancement and survival of the species.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora was established to control trade in endangered species. It establishes an appendix system for the species depending on the degree of threat to the species. The requirements of the Convention are less strict than the requirements of the Act, however, the Convention allows for and encourages stricter legislation. The Convention also provides an exemption for transshipment of wildlife through a country if it remains in Customs control.

A number of species are listed on both the Act and the Convention. When this occurs a shipment may qualify for the transshipment exemption under the Convention, but would be subject to the stricter provisions of the Act in that it would be an import into the U.S. and would be subject to seizure.

The term "import" is currently defined in the Act as meaning to land on, bring into, or introduce into, or attempt to land on, bring into, or introduce into, any place subject to the jurisdiction of the U.S., whether or not such landing, bringing or introduction constitutes an importation within the meaning of the Customs laws of the U.S.

The Lacey Act Amendments of 1981 which were signed into law November 16, 1981, have defined the term "import" as meaning to land on, bring into, or introduce into, any place subject to the jurisdiction of the U.S. whether or not such landing, bringing, or introduction constitutes an importation within the meanings of the Customs laws of the U.S.

It has been suggested that we adopt the definition of import used by U.S. Customs. The term "import" for Customs' purposes has not been defined in the Customs statutes. Various interpretations have been made by the courts.

The word "importation" has been used in tariff statutes in two different senses. On the one hand, it has been used to denote the time when the jurisdiction of the United States over the merchandise attaches. On the other hand, it has been used to denote the time when the status of such merchandise is to be determined with respect to duties chargeable thereon. (1951) *Mussman and Shafer, Inc. v. U.S.*, 27 OCR 180, CD 1367, Aff'd (1953) 40 CCPA 108, CAD 506.

Referring to this most recent court ruling it appears that Congress intended the term "import" to mean at the time when jurisdiction of the United States over the merchandise attaches, apply to wildlife and that all other meanings of "import" be overridden.

The conflict between the Act and transshipments under the Convention has not been a major problem. Current Service enforcement policy has addressed the situations where problems arise.

The current policy is:

1. Zero priority on passenger baggage.
2. Foreign nationals intransit through the U.S. are allowed to proceed with endangered species.
3. Trophy shipments and non-commercial (personal) shipments intransit through the U.S. from one foreign country to another foreign country may proceed even though they may contain an endangered species.
4. Commercial shipments containing endangered species are subject to seizure and forfeiture.

Comments Received:

None

Options/Evaluation:

A. Leave as is. (Status quo)

Pro:

1. Strong enforcement tool. Under this meaning wildlife is still in the custody and control of U.S. Customs. It is subject to inspection by Service officers from the time of landing until cleared. This provides a mechanism for Service inspection and detection of import violations prior to the wildlife being entered into the commerce of the U.S. It also provides a tool for the detection of Lacey Act and other criminal violations.

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Con:

1. May occasionally override the transshipment exemption of the Convention.
- B. Leave as is and provide an exemption for non-commercial transshipments for species listed by both the Act and the Convention. (Statutory change)

Pro:

1. Would still provide strong enforcement tool and provide for inspection and detection.
2. Would provide for by statute the current enforcement policy.

Con:

1. Virtually impossible to distinguish commercial and non-commercial shipments before inspection.
2. Provides a loophole for transit of items in violation of law.
- C. Leave as is and provide an exemption for transshipment of species listed on both the Act and the Convention. (Statutory change)

Pro:

1. Solves the problem of transshipments.

Con:

1. Would circumvent the intended purpose of the Act.
2. Would allow the U.S. to be a conduit for commercialization in endangered species.
3. Would allow the U.S. to be a free port for endangered species (i.e., a U.S. citizen could ship endangered wildlife into the U.S., place it in a warehouse under Customs control, locate a foreign buyer and re-export without being detected).
- D. Change definition of import to the tariff meaning of merchandise presented for assessment of duties. (Statutory change)

Pro:

1. Solves the problem of transshipments.

Con:

1. Would circumvent the intended purposes of the Act.

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2. Would allow the U.S. to be a conduit for commercialization in endangered species.
3. Would allow the U.S. to become a free zone (same example as in Option C).
4. Data collection would be destroyed. Inspection could not be made until owner filed an entry with Customs to enter items in commerce.
5. Would completely destroy the import/export procedures. The requirement to use designated ports could not apply since U.S. Customs allows shipments to proceed to the Customs port closest to its destination before final entry and assessment of duty occur. FWS inspection would not be available and all Service controls would be totally frustrated.
6. Would not allow the Service to meet its obligation under the Convention, i.e., the collection and cancellation of foreign documents.

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Revised 11/24/81

Issue: Review the Application of Sections 9(b) (1) and 9(b) (2) to CITES Species.

Appendix B - H.2.f. Priority II

Discussion:

Sections 9(b) (1) and 9(b) (2) of the Act provide exemptions for pre-act wildlife and certain raptors. The language of these subsections, "this section shall not apply to," exempts such pre-act wildlife and raptors from the entirety of Section 9, which includes the prohibitions applied by CITES Section 9(c) and the designated port and reporting requirements of Section 9(d). There is reason to believe that Congress did not intend to override the U.S. international obligations to apply CITES to these species. In addition to preventing the United States from meeting its international obligation, such an interpretation could cause problems for persons engaging in legitimate transactions, in that it is not clear that the Service has the authority to issue CITES permits for such specimens. This would mean that other countries may not allow the importation of such specimens because they lack the appropriate permit from the United States.

Comments Received:

There were no comments received on this issue.

Options/Evaluation:

- A. Interpret the present language to apply these exemptions to the CITES responsibilities of the U.S. [Section 9(c) (1)] and the designated port and other requirements of Section 9(d). (Policy change)

Pro:

1. Congress may very well have intended this effect.
2. It is the proper legal interpretation.
3. It alleviates some burdens.

Con:

1. Prevents the U.S. from meeting its international obligations under CITES.
2. Raises a legal question concerning our authority to issue a permit where none is required by law. Thus exporters of raptors or pre-act specimens may be refused entry into CITES Parties, or have their shipments seized, for lack of a U.S. issued CITES permit.
3. Allows items of questionable status to evade designated port, inspection, and reporting requirements.

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- B. Amend the Act to provide that both exemptions apply only to Section 9(a) (Endangered and Threatened species prohibitions). (Statutory change)

Pro:

1. Allows the U.S. to meet its international obligations under CITES.
2. Authorizes CITES permits to be issued for such specimens.
3. Retains the designated port and reporting requirements, which are a cost-efficient method of data gathering and control for CITES and other laws enforced by the FWS.
4. Avoids ambiguity and confusion for persons dealing with such specimens in those situations where the specimen is covered by other laws (such as the Migratory Bird Treaty Act, Marine Mammal Protection Act, etc.).

Con:

1. Requires persons to comply with CITES and designated port and other Section 9(d) requirements.

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Revised 12/30/81

Issue: Clarify Pre-Act Exemption

Discussion:

Conflicting Federal circuit court opinions have made it necessary for the Service to establish policy regarding the applicability of the prohibitions of Section 9 of the Endangered Species Act to pre-Act wildlife held in the course of a commercial activity after December 28, 1973.

In the Case of U.S. v. Kepler, 531 F.2d 796 (6th Cir. 1976), the U. S. Court of Appeals for the Sixth Circuit ruled that the exemption did not apply to wildlife transported in the course of a commercial activity in 1974, even though the wildlife may have been held for noncommercial purposes on December 28, 1973.

However, in the case of U.S. v. Molt, No. 79-2409 (3rd Cir. July 17, 1980), the U.S. Court of Appeals for the Third Circuit held that the pre-Act wildlife clause renders the Act's prohibitions unduly vague when applied to wildlife held commercially after December 28, 1973. The majority of the court in Molt ignored Kepler and refused to consider the exemption's legislative history. Focusing instead on the syntax of the exemption, the majority in Molt noted that the language of the exemption stating its inapplicability to wildlife "held in the course of a commercial activity" was separated from the language stating its applicability to wildlife held in captivity on December 28, 1973, by only a semicolon. The majority therefore concluded that the phrase, "held in the course of a commercial activity," could be read as referring only to December 28, 1973, and that as a result the Endangered Species Act failed to give sufficient notice that its prohibitions applied to wildlife held commercially after that date.

The Service believes the Third Circuit's Molt decision is wrong on the law, and if followed will have significant adverse effects on our endangered species program and open a large loophole in the Act's regulatory scheme. Under the Molt decision, defendants charged with violation of the Endangered Species Act will merely have to produce some evidence that on December 28, 1973, their wildlife was in a private collection or otherwise held for noncommercial purposes. Such evidence is virtually impossible to rebut and will become progressively more difficult as the years progress.

As a result, the Service's policy, which is incorporated in a LE memo, is to follow the Molt decision only in the Third Circuit, comprising the States of Pennsylvania, New Jersey and Delaware. In all other circuits the Kepler decision is followed.

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Comments Received:

None

Options/Evaluation:

- A. "No action" option - Continue to issue policy statements as needed and await unlikely Supreme Court decision which reaches the result in Kepler. Under this option it is unlikely that a nationwide, uniform interpretation of the pre-Act exemption following the result in Kepler would be reached in the near future. (Status quo)
- B. Amend 50 CFR Part 17 to resolve the conflict. The Service would amend 50 CFR 17.4(a)(2) by inserting after "activity" and before the period of the first sentence, "on or after December 28, 1973" (emphasis added). Upon promulgation, such a change would have the force and effect of law and would be subject to substantial deference upon judicial review. (Regulatory Change)
- C. Amend the Act to clarify the pre-Act exemption. Congress could change the syntax of the exemption as suggested by the Molt decision or add the phrase "on or after December 28, 1973" at the end of the first sentence in Section 9(b)(1). Such a change would end any inconsistent interpretations once it is made. (Statutory Change)
- D. Amend statute to clearly indicate that pre-Act species are exempt from possession and commercial prohibitions of Section 9(a). (Statutory Change)

Pros:

- 1. Clarifies exemption.
- 2. Exempts sales of pre-Act species which are often small, one-time transactions, such as the estate sale.

Cons:

- 1. May create law enforcement problems in distinguishing between exempt and non-exempt species.
- 2. Allows sale of endangered species.

Revised 11/24/81

Issue: Should Section 9(c)(2) be amended so as to limit its application to sport-hunted trophies?

Appendix B - Issue I.H.2.e. Priority II

Discussion:

Section 9(c)(2) of the ESA provides an exemption for certain items from the importation provisions of the Act. That section states that the non-commercial importation of any fish and wildlife species that is not an endangered species and is listed on Appendix II of CITES shall be presumed to be a valid importation. 16 U.S.C. 1538(c)(2).

In practical terms, this means that endangered species that are also listed on Appendix II of CITES are exempt from the import provisions of the ESA and CITES. Illogically enough, this means that threatened species which are deemed not to require CITES protection have more protection under the ESA than threatened species that require the trade restrictions of CITES.

An example of this is appropriate. If the Service listed a species as threatened and promulgated a special rule limiting importation, subsequent listing of that species on Appendix II of CITES would negate the special rule with respect to non-commercial importations. Section 9(c)(2) would exempt non-commercial imports of that species from the ESA prohibitions.

The legislative history of 9(c)(2) suggests that it was meant to apply only to sport-hunted trophies. However, the language of the section as presently written applies the section's exemption to all non-commercial importations of non-endangered, Appendix II species. The conclusion of the Solicitor's Office is that this was a mistake in drafting.

It was recommended by Law Enforcement and the Solicitor's Office that ESA be amended to eliminate this loophole in importation enforcement for threatened species. This could be accomplished by new statutory language that would specifically limit the application of Section 9(c)(2) to sport-hunted trophies.

Comments Received:

Only one comment was received. The National Forest Products Association did not comment on the issue raised, but termed Section 9(c)(2) "superfluous" in the context of other changes proposed by the association.

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Options/Evaluation:

A. Retain the statutory language as it is at present. (Status quo)

Pros:

1. Avoids expenditure of resources for an issue which has not, up to the present, caused substantive problems.
2. If the Department prefers a broader application of Section 9(c) (2), the present language is adequate.

Cons:

1. Retains inconsistency between present language and its legislative history.
 2. Retains present loophole in regard to threatened species.
- B. Amend the ESA to limit application of Section 9(c) (2) to sport-hunted trophies. (Statutory Change)

Pros:

1. Removes inconsistency between present language and its legislative history.
2. Eliminates present loophole in regard to threatened species.

Cons:

1. Results in expenditure of resources on an issue which has not, up to the present, caused substantive problems.
2. Would not reflect Department's preferences if broader interpretation of Section 9(c) (2) is preferred.

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Revised 12/30/81

Issue: Explore other methods of Handling Foreign Species; examine shifting the listing of such species to CITES.

Discussion:

This issue arises from the overlap of the endangered and threatened species list and the three appendices of species covered under CITES. The majority of species listed as endangered and threatened are also listed on either Appendix I, II or III of CITES. This creates, on a daily basis, confusion in the minds of applicants, especially those in the business community, because of the differing requirements of CITES and the Endangered Species Act. For example, the Act has very restricted allowance for permits for endangered species: permits are allowable only for scientific research or enhancement of the propagation or survival of the species. Under Appendix I of CITES, there is no such limitation on the purposes for which permits can be issued, with the exception that permits are not available for purposes which are primarily commercial. In addition, both the Act and CITES have grandfather clauses for specimens held prior to the time that each came into effect, but the dates of application and the conditions relating to such grandfather clauses are different. Also, the Act covers all forms of importation, while CITES has an exemption for specimens which are simply transiting a country.

At the present time, the regulations implementing Section 7 of the Act do not provide for application of the Section 7 review to overseas activities of the United States Government. In the absence of this coverage, the only protection afforded by the Act to listed species is to restrict the importation and to restrict interstate movement and exportation of captive-held specimens of foreign species. (The issue of captive-held specimens is dealt with under a separate paper.) This coverage of the Act overlaps with the CITES protections afforded to species which are listed under both the Act and CITES. In addition, CITES listings are accomplished through an international mechanism, where the country of origin of the species is normally the moving party for such listing. The Act listing is done solely within the United States, with consultation with the country of origin. There have been a number of instances where the countries of origin of various species have disagreed with the listings under the Act. Finally, CITES has an international mechanism for the regulation of trade for the purpose of conservation of the listed species. This international mechanism is conceived to be more effective in controlling the detrimental effects of trade on these various species, as opposed to a strictly national listing which can only control or deny access to the U.S. market for such species.

Attached to this paper is a copy of the endangered species list with annotations indicating the status of those species in the CITES appendices.

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Comments Received:

Three comments were received on this issue. The first was from the Elsa Wild Animal Appeal and appeared to indicate that strong U.S. leadership in denying a market to foreign endangered and threatened species was important. The second was from a meeting of the Coalition of Environmental Groups which are reviewing the Act, in which they pointed out a concern for duplication in the implementation of CITES and the administration of the Act, and also indicated concern over the lack of application of Section 7 to foreign activities of U.S. Federal agencies. Private communication with a representative of the Natural Resources Defense Council indicates a serious concern on their part over the elimination of foreign species from the endangered and threatened species lists. They feel that as long as those species are listed, even if Section 7 does not formally apply to U.S. activities overseas, there is an inclination on behalf of Federal agencies to take into account the needs of the species and their habitats that are still listed. Third, a letter from the Association of Systematics Collections indicates that the overlap between the Act and the CITES listings create problems for the transfer of museum and scientific specimens.

Options/Evaluation:

- A. Status quo with future listings of foreign species done primarily under CITES. Present listings of foreign species under the ESA could be removed during the 5-year reviews. (Current policy)

Pro:

1. No expenditures for "delisting" foreign species now on the ESA list.
2. Unnecessary overlap would be eliminated from now on.

Con:

1. Over half of the present ESA list are foreign species also listed under CITES. Thus considerable overlap would remain.
2. Since so many major groups of species are already listed under CITES, handling future listings under CITES will not appreciably reduce the administrative problems.

- B. In addition to future listings of foreign species being handled under CITES, present listings should be shifted so that primarily native species appear on the ESA list. (Policy change)

Pro:

1. The administrative problems and confusion created by the present overlap would be eliminated.

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2. Since the primary impact the U.S. can have on foreign species conservation is trade control, this option will tailor the legal restrictions to the appropriate "fit."
3. The U.S. would not be accused of being a "big brother" by making status decisions on species occurring in other countries.

Con:

1. The cost of delisting over half of the present ESA list by present regulatory procedures would be far out of line with present priorities.
 2. Whatever leadership or informal adherence to Section 7 presently accomplished would be lost.
- C. Add a new prohibition subsection in Section 9 which would apply the CITES prohibitions and exceptions to any species listed on the ESA which is also covered by CITES. Retain the ability to apply ESA prohibitions where appropriate, by regulation. (Statutory change)

Pro:

1. Accomplishes the goal of eliminating overlap and confusion without the cost of "delisting."
2. Retains recognition type benefits which flow from an ESA listing other than the Section 9 prohibitions.

Con:

1. There might be risks of unforeseen changes in the legislation when this area is opened up for amendment. However, since CITES language is already very specific, we could adopt it directly and minimize the risk.
- D. Revise statute to provide for protection of foreign species by CITES alone and to remove foreign species now, and in the future, listed both on the ESA list and CITES. Retain ability to apply ESA prohibitions, where appropriate, by regulation. (Statutory change)

Pro:

1. Eliminates overlap between ESA and CITES in prohibitions, permits, and exemptions.
2. Statutory change avoids cost of delisting foreign species.

Con:

1. Eliminates protection given foreign species by possession and interstate commerce prohibitions of the ESA.

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CATEGORY	TOTAL ESA LISTINGS	NUMBER OF SPECIES* ALSO LISTED ON CITES			TOTAL	% OF ESA LISTINGS ALSO LISTED ON CITES
		NATIVE	NATIVE/FOREIGN	FOREIGN		
MAMMALS	280	2 E	17 E / 2 T	146 E/7 T	174	62%
BIRDS	213	5 E	10 E	88 E	103	48%
REPTILES	80	1 E	4 E / 1 T	37 E	43	54%
AMPHIBIANS	16	---	---	5 E	5	31%
FISHES	56	3 E	3 E	4 E	10	18%
SNAILS	9	---	---	1 E	1	11%
CLAMS	25	22 E	---	2 E	24	96%
CRUSTACEANS	1	---	---	---	0	0%
INSECTS	13	---	---	---	0	0%
PLANTS	63	21 E	1 T	2 T	24	38%
TOTALS	756	54 E	34 E / 4 T	283 E/9 T	384	51%

* E = ENDANGERED

T = THREATENED

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FOREIGN SPECIES

Differences in ESA and CITES

	<u>ESA</u>	<u>CITES</u>
Permit Requirement	• End. Species - Permits only for scientific research, or enhancement of propagation or survival. • Threat. Species - Generally permits available for above purposes plus education, zool. exhibition, and special purposes. • End. Species permits must be published in FR with 30 days for public comment. • Permits required, generally, for import/export/interstate commerce/taking in U.S. and on high seas. • Some captive-bred exotics exempt.	• App. I - Permits available for any purpose except commercial activities. Trade is supposed to be strictly regulated and authorized only in exceptional circumstances. • App. II - No purpose specified. Trade is supposed to be strictly regulated "to avoid utilization incompatible with (species) survival." • All CITES permits require a "non-detriment" finding by scientific authority. • Permits required for import/export. • Personal and household effects exempt (with some qualification). • Captive-bred specimens exempt (with some qualification).
Grandfather Clause	• Specimens held non-commercially prior to Act exempt. Exemption lost by later commercial transaction. • Raptors held prior to 11/10/80 and their progeny exempt. • Antiques made before 1830 exempt. • Whale oil and scrimshaw held commercially prior to Act is exempt.	• Specimens acquired prior to the time the Convention applied to them exempt. Certificate of exempt. required. [Note: term "acquired" and the date of applicability of CITES under discussion by Parties. Preferred U.S. view is: taken from the wild prior to effective date of listing on CITES.]
Definition of Import	• Includes any entry into U.S., whether or not in transit.	• No definition in CITES. Regs adopt ESA definition, except transit and transshipment are exempt.

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Revised 12/30/81

Issue: Review of the Registration (Licensing) Requirements for Importers and Exporters

Discussion:

This issue was raised by the Solicitor's Office. Section 9(c) of the Act provides that it is unlawful for any person to engage in business as an importer of fish or wildlife without having first obtained permission from the Secretary. Pursuant to this provision, the Service promulgated regulations requiring all persons who engage in business as an importer or exporter of wildlife to be licensed. The licensees must pay \$50 for the license (valid for two years), keep certain records and retain them for 5 years, allow Service inspection of records and inventory of reported wildlife, and file any requested reports. These regulations exempt from the license requirement, a number of persons/businesses (Custom House brokers, common carriers, etc.) and all persons who import or export less than \$25,000 worth of wildlife a year. In addition, a regulatory revision to exempt all taxidermists from the licensing provision is in progress.

To date the Service has issued approximately 1800 import/export licenses and is evaluating the potential of expanding the benefits accruing to an import/export license holder by incorporating the features of some permits into the license system.

To date, the Service has issued approximately 1800 import/export licenses and is evaluating the potential of expanding the benefits accruing to an import/export license holder by incorporating the features of some permits into the license system.

One area of consideration is to authorize the holder of a license to use his license number as a symbol mark to meet the marking requirements of the Lacey Act. License holders would no longer have to make application to the WFO, pay a \$25 fee and renew a symbol marking permit every 2 years. This would eliminate symbol marking permits, the workload for WFO would be reduced, and businesses would no longer be required to obtain a symbol marking permit or keep records concerning its use.

Comments Received:

None. (A number of comments received earlier caused the Service to revise the regulation providing the \$25,000 floor and to exempt taxidermists.)

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Options/Evaluation:

- A. No change in Section 9(d) and retention of the present import/export license. (Status quo)

Pros:

1. It identifies major importers and exporters and provides the Service with a means of communicating with these people.
2. It provides the Service with intelligence concerning the often changing corporate identities of suspect operators.
3. It provides essential legal authority to inspect business records and copy them if necessary.
4. It assures that business records of a reasonable standard will be kept and will be maintained during the statute of limitations period.
5. It is an integral part of the Service export control mechanism, because:
 - a. It insures the filing of import and export declarations.
 - b. It provides the Service with an opportunity to inspect exports which would not otherwise exist.
6. It creates a deterrent to illegal commercial wildlife activity.

Cons:

1. It will not stop complaints from those who simply object to having to acquire a license and who object to any possibility of inspection.
2. It may not stop all complaints about recordkeeping, although the Service does not expect a licensee to keep any records beyond the normal business records already maintained by most businesses and retained for tax purposes.
3. It will not stop complaints from those who are concerned that they could be put out of business by losing their license upon conviction for minor or technical violations. The Service has never sought permit revocation except for repeated offenses of a serious nature. Moreover, licensees have a vested right in the license and the right of due process in any attempted suspension or revocation.

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- B. Seek abolishment of provisions in Section 9(d) requiring permission of Secretary to engage in business as an importer or exporter of wildlife (Statutory Change)

Pros:

1. Ends all complaints concerning licensing and recordkeeping.
2. Service would be relieved of issuance responsibility.

Cons:

1. All the benefits (Pros) of the system described above would be lost.
- C. Retain licensing but eliminate record-keeping other than that required by other laws. (Statutory Change)

Pro:

1. Retains identification of major importers and exporters while reducing requirements under the Act.

Con:

1. May eliminate some records that may have a law enforcement utility.

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Revised 11/24/81

Issue: Explore antique exemption - Needs clarifying to conform with Customs.

Appendix B - Issue I.2.b. Priority II

Discussion:

There have been no significant problems with this section, however, some importations have occurred which meet Customs' requirements for antiques (100 years old) but failed to meet the ESA criteria of made before 1830.

The U. S. Customs Service was assigned the responsibility of this section, and an interim operational procedure was issued to Customs Inspectors in December 1980 or January 1981. To date regulations have not been promulgated. The public has not been formally notified of the requirements of this section, or that the section contained a one-year provision for any person who had imported ESA antiques between December 28, 1973 and November 10, 1978, which were forfeited to the Government, to make application for the return of the item if they met certain conditions. This provision expired November 10, 1979.

Comments Received:

None

Options/Evaluation:

- A. Leave as is since it has not created any significant problems. Customs has recently proposed regulations which deal with this inconsistency. (Status quo)
- B. Amend the statute to delete the language "was made before 1830" in Section 10(h)(1)(a), and replace with language "is 100 years old." Delete the provision for return of forfeited items 10(h)(4) since it has expired. (Note: The year 1830 was derived from the Tariff Act of 1930 which carried language which specifically addressed the year 1830. The reasoning for the use of the year 1830 is that the industrial revolution occurred around the year 1840, which caused dramatic style changes in furniture. This dramatic change made it easy to establish pre- or post-revolution. For items other than furniture, the year 1830 has no significance to Customs in making a determination of authenticity. The Tariff Act was amended in 1962 with an effective date of August 31, 1963 by removing the year 1830 and replacing it with is 100 years old.) (Statutory Change)

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Revised 12/30/81

Issue: Review of PenaltiesDiscussion:

Origin - Solicitor's Office. No known problems, public concerns or misunderstandings. SOL is simply requesting review to determine if problems exist.

Comments Received:

No comments were received.

Options/Evaluation:

The ESA of 1973 has in effect a five-stage set of civil penalties and a two-stage set of criminal penalties which distinguish between culpable and non-culpable violators, commercial and non-commercial violators, and violators of recordkeeping, violators of statutory and substantive regulations versus violators of recordkeeping and reporting violations. Civil penalties from \$0 to \$10,000 may be assessed for knowing violators or commercial violators. A strict liability penalty of \$500 is provided, which was last amended in 1978. Criminal penalties range from \$0 to \$20,000. These provide adequate judicial latitude. Maximum jail time is one year. However, in view of the fact that most major defendants are corporate entities and a felony provision would require indictment, a penalty increase does not seem advisable at this time.

SOL Recommendation

Review all wildlife statutes and recommend statutory provisions implementing uniform penalties and uniform exemptions. (This would ultimately lead to statutory changes, although, recommendations would not be formulated in time to include in the January 15 package to OMB.)

Pro:

1. Consistency in law enforcement efforts under the various wildlife laws.

Con:

1. Would involve substantial Departmental resources.

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New Issue: 11/27/81

REAUTHORIZATION/REGULATORY REVIEW OF THE ESA
Prohibition Against Possession of CITES
Species

Issue: Should the existing prohibition against possession of specimens traded contrary to the provisions of CITES be retained.

Priority: 3, Number 28 (Appendix I.H.2.h.)

Discussion:

The Endangered Species Act implements the Convention on International Trade in Endangered Species of Wild Fauna and Flora ("CITES"). The signatory parties to CITES must agree to take appropriate domestic measures to enforce the provisions of the Convention against trade in listed species. Article VIII of CITES indicates that these measures shall include the penalization of trade in, or possession of, listed species, or both. The Endangered Species Act, in section 9(c)(1), prohibits trade in violation of CITES and the possession of any specimens illegally traded. 16 U.S.C. 1538(c)(1).

The issue raised here is whether both prohibitions in the domestic legislation are necessary. Problems arising from the possession prohibition occur in the areas of disposal and innocent purchasers.

The first problem concerns the Secretary's authority to dispose of items forfeited because they were traded contrary to the provisions of CITES. If these are deemed to be contraband items, it could be argued that the Secretary cannot sell them to members of the public because mere possession of the item is illegal. This conflicts with the present Departmental position that the Secretary was granted broad authority in the Fish and Wildlife Improvement Act ("FWIA") to sell forfeited items, when appropriate, under the ESA.

This problem may be more theoretical than real, however. The Solicitor's Office has taken the position that the statutes authorizing the Secretary to dispose of forfeited items, especially the FWIA, implicitly authorize the buyers of such items to possess them, notwithstanding the provision of 9(c). Since this position has not been challenged to date, reliance

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upon the language of statutes such as the FWIA, without statutory change, appears to meet the Department's needs at present. It should be noted, though, that the Department has decided, as a matter of policy, that it will not sell endangered species or species listed on Appendix I of CITES.

The holder-in-due-course problem results when an innocent buyer purchases a contraband item. Even though the buyer is not aware that the item has been traded in violation of CITES, he could lose it in the course of a forfeiture action, although under the law, such a buyer can sue the seller for the value of the item forfeited. Many of the wildlife laws have prohibitions concerning illegally taken or traded items; for example, it is illegal to possess a species listed as endangered under section 9(a)(1)(D) of the ESA if that species was taken or traded illegally. 16 U.S.C. 1538(a)(1)(D). Under both the Migratory Bird Treaty Act, 16 U.S.C. 703, et seq., and the Bald and Golden Eagle Protection Act, 16 U.S.C. 668, it is illegal under any circumstances to possess the protected species without a permit.

Prohibitions against possession are powerful enforcement tools. Therefore, the law enforcement benefits must be weighed against the inconvenience caused the innocent buyer of a contraband species.

Comments Received:

No comments have been received specific to these issues.

Options:

The options here are as follows:

(1) Retain the existing prohibition against possession of species traded contrary to CITES.

Pros:

(a) Consistent with intent of ESA and CITES to remove endangered species from commerce.

(b) Existing prohibition is an important enforcement tool.

(c) Reliance upon disposal authority contained in FWIA for authority to sell contraband species has not produced any challenges.

(d) Inconvenience to innocent buyer is outweighed by importance of prohibition as an enforcement tool.

Cons:

(a) Does not eliminate possibility of innocent buyer losing item through forfeiture.

(b) Does not eliminate possible challenge to present Departmental position on sale.

(2) Amend the ESA to eliminate prohibition against sale of species traded contrary to CITES.

Pros:

(a) Eliminates possibility of innocent buyer losing an item through forfeiture.

(b) Eliminates possible challenge to present Departmental position on sale.

Cons:

(a) May be inconsistent with the intent of the ESA and CITES to remove endangered species from commerce.

(b) May be unnecessary in disposal context as present Departmental position on sale has not produced any challenges.

(c) Elimination of slight costs to innocent purchaser may not warrant elimination of this enforcement tool.

(3) Recommend a technical amendment to the ESA that would clearly authorize sale of contraband species to the public (see, also, option paper on disposal authority).

Pros:

(a) Eliminates possibility of court challenge to present Departmental position on sale.

(b) Is consistent with the broad disposal authority granted the Secretary in the FWIA.

Cons:

(a) Option does not address innocent buyer situation.

(b) May be unnecessary as present Departmental position on sale of contraband species has not been challenged.

Revised 11/24/81

Issue: Permit Procedures/Duplication (Permit Clearinghouse)

Appendix B - 1.2.d. Priority I

Discussion:

The improvement of procedures for reviewing permit applications and issuing permits has been a goal of the Department for several years. It was for this reason that the Wildlife Permit Office was created to take over the work on those permits issued in Washington, and to prepare for the issuance of permits under the CITES. Since its inception in late 1976, the permit workload of WPO has grown from about 600 per year at that time to approximately 2700 per year at the present time. The Service issues approximately 5000 migratory bird permits of renewals through the Law Enforcement Division annually. The Departments of Commerce, Agriculture and Health and Human Services also issue permits which overlap or duplicate to a certain degree the permits issued by the Fish and Wildlife Service. In addition, land managing agencies and divisions, such as the Division of Wildlife Refuges, the Bureau of Land Management, and the National Park Service issue permits which restrict or allow physical access to certain land areas.

Since 1973 Congressional and public discontent and frustration have grown over the bewildering array of laws, lack of information and red tape. Executive Order 11911, issued in 1976, directed the Department to "develop and implement a system to standardize and simplify the requirements, of procedures and other activities related to the issuance of permits" for fauna and flora.

The Wildlife Permit Office has revised many permit procedures and is now beginning to use automatic data processing to reduce the complexity and to speed up the issuance of permits. The average review time for endangered species permits has been cut from approximately 120 days to approximately 60 days. The Division of Law Enforcement, in coordination with OES and WPO, has been investigating the acquisition of a large data base computer system that can be used for permits. It is presently estimated that this system could be on line in approximately one year.

WPO is presently carrying out an evaluation of the systems for issuing permits throughout the Fish and Wildlife Service. This is being done as an MBO project, and is presently in the planning phase.

WPO has consistently been examining existing permit requirements and has recommended the elimination of several such requirements wherever appropriate without legislative changes. For example, permits to allow shipments through nondesignated ports of entry are now issued by special agents in charge in the field Law Enforcement Division. Separate permits for import and export of migratory birds have been dropped, relying instead on the possession permits also issued in a field level with the Law Enforcement Division. WPO has also simplified the permit application

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process by putting questions required to be answered by applicants directly on the back of the application forms, rather than requiring the applicants to sort through a mass of various regulations. WPO has also developed quite a number of fact sheets to explain the various requirements to applicants, and is presently developing a brochure aimed at the business community on the CITES requirements. WPO will continue to investigate methods of simplifying the issuance of permits, particularly looking at the application of automatic data processing.

In 1978, at the request of the Fish and Wildlife subcommittee of the House of Representatives, the WPO carried out a specific study of the feasibility of a clearinghouse operations as referred to in Executive Order 11911. At that time, draft legislation to institute such a clearinghouse was prepared. However, limitations on personnel and dollars, as well as a waning of interest in the Congress have prevented such a clearinghouse from coming into being.

It should be noted that the Department of Justice's task force on enforcement of wildlife laws has focused on the reduction of overlap between different permit and information requirements of various agencies. They have looked to the Service and WPO for a resolution of this matter. Also, WPO is about to institute the uniform CITES permit for use by the United States. WPO is also planning a series of workshops aimed at increasing the knowledge of the business community about the various overlapping production of a reference book for the business community, to be updated regularly, providing essential information on permit requirements. In the meantime, WPO, along with OES, OSA, and LE have achieved significant time improvements in the intra-agency system for the review of permits. Other papers will deal with the topics of the overlap between a Section 7 no-jeopardy opinion and the necessity for a permit.

Comments Received:

Thirteen comments were received which apply in one way or another to this issue. In reviewing the comments it became apparent that this issue and the issue under Appendix B. No. I.2.a. that is the revision of permit regulations and the role of the States was related to any consideration of this issue. For example, Louisiana submitted two separate comments one of which recommended issuing permits at a local level as opposed to Washington to avoid bottlenecks. Their second comment discussed the simplification of permit applications for American alligators. Unfortunately, their second comment actually is governed by the regulations over American alligators under the Threatened Species listing. The simplification of permits for American alligators is actually a problem of substantive policy for the American alligators and is dealt with in other issue papers on the relationship between CITES and the Endangered Species Act in the nature of no detriment findings for CITES species.

The State of Alaska submitted three comments on permits. The first comment deals with special use permits for work of wildlife refuges and CITES 50 CFR

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Part 13, which is apparently the wrong citation for refuge permits. However, its point is that it would be much simpler to do work under cooperative agreements as opposed to the annual renewal of special use permits. The second comment from Alaska deals with the institution of the "Letter of Authorization" system by WFO. Currently, the comment from Alaska is a misunderstanding of the LOA system, because it assumes that all permits must be obtained under an LOA. In fact, LOAs are simply a mechanism to allow those people with repetitive shipments of wildlife to obtain a form of preclearance and then obtain subsequent permits immediately, rather than suffer the delays of an individual permit review every time they want to make a shipment. The third comment from the State of Alaska deals with the combination of the port of entry and export requirements, the requirement for import/export licenses for persons in the business of trading wildlife in international commerce and the requirements for separate permits for specific shipments. They recommend several special exemptions to avoid problems for Alaskans shipping items directly from Alaska.

The State of Texas commented that at present only States with cooperative agreements under Section 6 of the Act can carry out certain activities without permits, and recommended that States with approved projects under the Federal Aid in Wildlife Restoration Act also be allowed to carry out activities with endangered species covered by such projects without the requirements of getting a separate permit.

The State of New Mexico requested more joint work between this Department and the Department of Agriculture on permits as well as other matters...

The State of Arkansas simply commented on problems where permit applications became lost and the waste of time through waiting for them to be duplicated.

Two private associations commented requesting special exemptions for scientific work which presently requires permits. The Association of Systematics Collections requested specific exemptions for the transfer of museum specimens. They pointed out that scientists face an overwhelming array of overlapping requirements for such transfers administered by a number of agents. The American Society of Ichthyologists and Herpetologists requested a series of specific exemptions for scientific shipments.

Three regions commented on problems with permits. They were dealing with the concept of blanket permits to do endangered species work. Region 2 commented that the present policy requirement that any Service activity carried out under a blanket permit required a Section 7 review for each such activity nullified the usefulness of the blanket permit. Region 6 indicated that much time and wasted action could be saved if each Regional Director was given a blanket permit for all protective and recovery actions necessary for endangered species. Region 3 commented that it was reluctant to take on the responsibility of a blanket permit without additional finding of manpower. They indicated that species specific permits meet their needs.

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Options/Evaluation:

- A. Retain the status quo with a number of offices issuing permits.
(Status quo)

Pros:

1. Most agencies have well developed procedures and constituencies.
2. Many agencies are likely to resist a perceived "raid" on their jurisdiction.

Con:

1. Overlap and duplication with resulting confusion and burden on the public continues.
- B. Amend the Act to institute a permit clearinghouse system. The information to the public and for all permit applications and all final actions on permits to be handled through the Department. The responsibility presumably would be lodged in the WPO. The substantive responsibilities, however, would be retained by the other offices, divisions and agencies. This would include inspection of applicants and their facilities, investigation of violations, final judgments on the issuance or denial of permits, the substance of terms and conditions of such permits, and the enforcement of permit conditions.

The essential purpose of such a clearinghouse would be to avoid duplication and overlaps between offices and Federal agencies; to increase the effectiveness of the various permit systems by (1) avoiding the situation where one agency's clearance gives implicit authority for the requested action even though another agency has requirements that must also be met, and (2) increasing voluntary compliance through reduction of confusion and frustration. (Statutory Change)

Pros:

1. Centralization of information functions, through the use of ADP, would increase efficiency.
2. Actual processing could, where appropriate, be decentralized.
3. Through the Letter of Authorization system, WPO has already found a way to handle certain aspects of the permit system centrally, while decentralizing other portions of the permit activity. This has made it possible to handle a great number of permits much more quickly than before, and yet have much of the permit activity take place at a local level, which is much more convenient for the permittee.

4. Although the application of automatic data processing and the necessary personnel to accomplish the revision of the system will lead to some initial costs, this should be more than offset by the savings to other offices and agencies through reduction in their personnel costs relating to permit processing.
5. This system could be extended to the overlap between Federal and State permits. It would be the goal of this amendment to bring the States in a full partnership in the review of permit applications and the issuance or denial of permits affecting their interests.

Cons:

1. Some agencies may resist a perceived "raid" on their jurisdiction.
2. Startup costs for personnel and ADP services would be at least \$50,000. However, acquisition of the LEMIS system for which costs are already programmed should reduce this.

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Revised 12/20/81

Issue: Explore additional criteria for permits.

Discussion:

It has been suggested that additional criteria for permits should be written into the Act. At the present time, Section 10 restricts the issuance of permits for endangered species to permits for scientific research or activities which will enhance the propagation or the survival of the species. Regulations relating to captive specimens have defined the term "enhancement of the survival of the species," in such a way as to free up interstate commerce in captive specimens. The entire issue of the regulation of captive specimens is dealt with in a separate paper. The recommendations made in the paper on captive specimens and the discussion of the listing of foreign species under CITES in preference to listing under the Act represent alternative approaches to any changes in the criteria of endangered species permits.

Comments Received:

The American Society of Ichthyologists and the Association of Systematics Collections have recommended that permits be available for certain scientific specimens. National Forest Products Association proposed different language for this section, but their proposed changes were ambiguous.

Options/Evaluation:

- A. The comments by the first two professional associations merit further consideration. We believe that they represent types of scientific exchanges and salvage a collection of materials that should be allowed under the Act. The present language of the Act, specifically in reference to scientific research, gives us sufficient authority to create registration systems or to issue general permits by regulation which would eliminate the need for specific permits for such transactions. In the absence of further comments or complaints about the restrictive nature of such intent, we believe that the proper conservation of endangered species is best served by leaving this language in its present form. There is sufficient authority to carve out the necessary exemptions by regulation or by the issuance of permits.
- B. Amend the statute to provide the Secretary with authority to grant permits for an additional category of activities under the standard that such activities are consistent with the purposes of the Act. (Statutory change)

Pro:

1. Allows greater flexibility in utilizing permits to achieve purposes of the Act.

Con:

1. May result in less protection for some species in certain situations.

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Revised 11/24/81

Issue: Captive Wildlife Deregulation

Appendix B - H.2.d. Priority I

Discussion:

The Act has been consistently interpreted by both the Department and the courts to apply to captive specimens of endangered or threatened species, as well as to specimens in the wild. The imposition of prohibitions and permit requirements on persons engaged in captive propagation of listed species has been continuously claimed by some persons to interfere with this work. Consequently, the Service revised its regulations in 1979 to issue a general permit for activities designed to enhance the propagation or survival of listed species. The term "enhance the propagation or survival" was defined to maintain limitations on certain types of euthanasia and other activities with captive animals and to allow the normal activities of breeding programs. This permission, available under the regulations, applies to any person who is registered with the Service and has met certain minimum standards. The regulations also cover exotic wildlife and the Laysan teal.

In a memorandum from the Secretary regarding regulatory reform issued in March of 1981, the exclusion of captive bred specimens from the Endangered Species Act was indicated as a high priority. The Acting Deputy Director's memo of April 1, 1981, indicates this action to be a joint responsibility of WPO and OSA. These two offices have held discussions and OSA drafted a memo in May of 1981, outlining a proposed change of the Act. On June 19, WPO briefed Assistant Secretary Arnett and Bob Jantzen, who indicated their receptiveness to this approach and instructed us to pursue it further.

Comments Received:

There have been very few comments received directly on this issue. A letter was received by AFA in May of 1981 from the Environmental Defense Fund, urging caution in any deregulation of captive animals. A letter to Secretary Watt in April of 1981 from the American Game Bird Breeders Federation urged the deregulation of captive wildlife. Several other letters have been received in the interim by the WPO from the zoo community indicating approval of the concept, but urging some continued regulations, primarily for the purpose of enhancing the identification of captive animals through the ISIS studbook system. There is a comment from OES personnel which indicates a belief that the present exemption in the Act for captive propagation was intended to be used to enhance or benefit the position of the species in question, and that it has been used primarily to further personal interests of the propagators. There is also a letter from the International Primate Protection League indicating that the control of captive wildlife breeding operations by the Department should be strengthened, primarily in regard to primate breeders. The letter is concerned primarily with the health and welfare of the specimens.

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4. The reduction in prohibitions and permit requirements would enable the Service to redirect its efforts toward problems of higher priority and greater conservation value.
5. Emphasis on CITES as the primary tool for protecting exotic species should strengthen international cooperation toward this end. The U.S. will less often be in the position of telling another nation how to manage its resources.

Cons:

1. The likely increase in interstate commerce might stimulate a market demand for certain endangered or threatened species, which in turn might prompt an increase in smuggling. However, this could be offset to some extent by increased captive propagation.
 2. Zoos, once the major proponent of this change, apparently have learned to "live with" the present system.
 3. The problem of taking in the form of euthanasia might be dealt with by regulatory changes.
- B. Make necessary adjustments by regulation. (Regulatory change)

Pros:

1. Retains controls which prevent truly unqualified individuals from dealing with rare species.
2. Retains additional controls to impart screening to avoid market stimulation effects.
3. Present interest in the issue does not appear to require broad statutory changes.

Con:

1. Present language of Section 10 of the Act raises questions as to how far euthanasia exception can be stretched by regulation (Section 10 allows permits for scientific research or enhancement of propagation or survival of the species.)

Revised 11/24/81

Issue: Should "taking" prohibitions under ESA be extended to include plants?

Appendix B - I.H.2.c. Priority II

Discussion:

ESA prohibits the "taking" of listed animal species, but not listed plants. This has detracted from FWS' ability to protect some plant species. In some cases, landowners have deliberately destroyed listed plants on their property in an attempt to avoid possible future entanglements with ESA. In other cases, e.g., cacti and carnivorous plants, listed species are under significant pressure from collectors. Under present law, the actions cited above are perfectly legal so long as they take place without Federal involvement. Interstate trade and import/export of listed plants is currently prohibited by Section 9.

Comments Received:

The National Forests Products Association suggested amendments which included a section prohibiting the taking of plants. Other commentators also encouraged stronger protection for listed plants.

Options/Evaluation:

- A. Maintain present lack of taking prohibitions for listed plants. (Status quo)

Pros:

1. Avoids possible adverse reactions.
2. Avoids possible constitutional challenge.

Cons:

1. Fails to improve FWS' ability to protect listed plants.
 2. Maintains unequal legal protection for plants vs. animals.
 3. Makes land acquisition more important in the protection and recovery of all listed plants.
- B. Institute a prohibition only against "taking" that is intended to reduce listed plants to possession. Aims to correct the over-exploitation, for horticultural purposes. (Statutory Change)

Pros:

1. Increases protection for species under threat of exploitation by collectors.

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2. Reduces adverse reactions by private landowners.

Cons:

1. Fails to increase protection for plants threatened by environmental alterations.
 2. Makes land acquisition more important in the protection and recovery of listed plants that are threatened by habitat alteration.
 3. Maintains unequal legal protection for plants vs. animals.
 4. May be open to constitutional challenge.
 5. May be difficult for LE to prove intent.
- C. Prohibit taking of listed plants on Federal land. (Statutory Change)

Pros:

1. Increases protection for listed plants.
2. Avoids issue of whether taking can be regulated on private lands.
3. Reinforces regulatory prohibitions already in place or being developed by some agencies.

Cons:

1. May be perceived by some Federal agencies as interfering with their own management procedures.
 2. Fails to provide listed plants on private lands with protection from taking.
- D. Encourage individual States to adopt taking prohibitions. Could be tied to Section 6. (Policy or Statutory Change)

Pros:

1. Increases protection for plants, including some not listed under Federal law.
2. Emphasizes State role in resource management.
3. Requires only policy initiative, rather than statutory amendment.
4. May avoid constitutional issue.

Cons:

1. Does not necessarily promote uniform protection for plants nationwide.
 2. Provides no obvious means to persuade State to adopt control.
- E. Institute taking prohibitions for listed plants that coincide with those now in effect for animals. (Statutory Change)

Pros:

1. Increases the ability to protect listed plant species.
2. Introduces uniformity of legal sanctions for all listed species.
3. May make more expensive recovery actions (e.g., land acquisition) less necessary for some species.

Cons:

1. May be open to constitutional challenge, since plants are generally considered to belong to the owner of the land upon which they grow.
2. May cause adverse reaction by landowners and plant collectors -- (however, this should be no worse than that brought on by taking prohibitions for animals).

Revised 11/24/81

Issue: Should certain types of information regarding Endangered and Threatened species be exempted from the Freedom of Information Act (FOIA)?

Appendix B - II.B. Priority III

Discussion:

Some listed species are vulnerable to vandalism or collecting. This may be exacerbated if detailed information is available to the public concerning the areas in which the species are found. It has been suggested repeatedly that detailed, site-specific information concerning listed species be released only on a "need to know" basis. This would require exemption from FOIA for documents containing such information. The species most likely to benefit from such exemption would be plants, because they are stationary and not protected from "taking." Animals with very specific and localized habitat requirements would also benefit.

Options/Evaluation:

- A. Exempt sensitive site-specific range information regarding listed species from FOIA and release it only on the basis of "need to know." This information is sensitive only in cases where species are threatened by over-exploitation. (Statutory Change)

Pros:

1. Increases protection from vandalism and collection for listed species.
2. Alleviates the problem of not having taking controls for plants.
3. Has apparently worked successfully in the case of similar problems with archaeological sites.

Cons:

1. May hamper some voluntary conservation efforts because of lack of needed information.
2. May foster the unjustified feeling that FWS keeps range information secret, then "ambushes" projects undertaken in ignorance.
3. May result in actions adversely affecting some listed species being undertaken through ignorance.

3. Continue to make all information concerning listed species available under FOIA. (Status quo)

Pros:

1. Tends to ensure awareness of presence of listed species so that potential conflicts can be avoided.
2. Fosters the impression that FWS is operating totally in the open.

Cons:

1. May result in serious adverse effects for some species, particularly plants not covered by taking prohibition, but also for animals that are either sedentary or have highly specific and localized habitat needs. Most serious negative effects are on exploited species.
2. Often discourages scientists and others possessing sensitive information from making it available to FWS for fear of its being released.

New Issue: 11/24/81

REAUTHORIZATION/REGULATORY REVIEW OF THE ESA
Conservation Authority

Issue: Should the definition of "conservation" and the "purposes" section of the ESA be revised to allow the Secretary additional flexibility to conserve listed species.

Priority: 3, Number 1 (Appendix I.B.2.b.)

Discussion:

I. An important term, "conservation", is defined in section 3 of the Act to mean:

. . . to use and the use of all methods and procedures which are necessary to bring any endangered species and threatened species to the point at which the measures provided pursuant to this Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

16 U.S.C. 1532(3).

The definition of conserve, then, sets up a high standard of responsibility for the protection of endangered and threatened species. It can also be argued that this standard is an overly rigid one that may in some instances actually hinder the recovery of a listed species.

One problem has been the uncertainty surrounding the authorization for allowing a regulated taking of a threatened species under the definition of "conserve". That definition only authorizes regulated takings when population pressures dictate this course of action. The definition on its face appears to apply to both endangered and threatened species. These taking restrictions in the general definition of "conserve", however, run contrary to the broad grant of Secretarial authority for fashioning discretionary regulations for threatened species in section 4(d) of the Act. The Service has on a number of occasions taken the position that regulated takings can benefit various threatened species in circumstances other than overpopulation. For example, many African predator species such as the leopard, are threatened by indiscriminate killing by local landowners. Creating economic value for the predators through means such as sport hunting could ultimately inure to the benefit of the species. Similarly, the Service's efforts to develop a flexible conservation plan for the timber wolf in Minnesota could be hampered if the limitations on takings in the definition of conservation are allowed to override the grant of discretionary regulatory authority in section 4(d). In other cases, limitations on takings and commercial trade are simply not necessary to conserve the species. For example, the kangaroo has recovered to the point where the animal has become a nuisance in Australia. Limitations on takings and commercial trade do nothing to help the species and, thus, eliminate a lucrative commercial commodity for no reason.

The relationship between the taking limitations in the definition of conservation and the Secretary's discretionary authority over threatened species in section 4(d) was recently at issue in the lawsuit challenging the Service's decision to allow the importation of Kangaroos from Australia. The D.C. District Court upheld the Secretary's authority to allow such importations. However, since the ruling was very narrow, it could be limited in application to only foreign species as opposed to native species. For this reason, it has been recommended that section 3 be amended to clarify and reaffirm the Secretary's authority to use regulated takings as a conservation tool for threatened species.

II. The "purposes" section of the Endangered Species Act states that the Act is intended to conserve endangered and threatened species and the ecosystems on which those species

depend. 16 U.S.C. 1531(b) The Secretary's responsibility under the Act is to take various measures to meet this conservation goal.

This statement of "purposes" under the Act has been read by some outside groups, in conjunction with the definition of "conserve", as requiring the Secretary to protect all remaining habitat of listed species, regardless of cost or effectiveness. The Service, on the other hand, has expressed interest in the past in "compromise" conservation plans that would result in the protection of some of a listed species habitat while allowing for the modification of the remainder. For example, a developer may agree to set up and pay for a comprehensive plan to conserve some populations of plants if he can destroy the habitat of other populations. Since there are no taking prohibitions for plants and money may not be available to acquire the relevant habitat, the Service may well wish to enter into such an agreement. Compromises such as this could often provide more actual protection for a listed species than the Service would be capable of providing on its own. It is, therefore, recommended that the Act be amended to formally endorse such compromise conservation efforts.

Comments:

There were no comments received specific to these issues. .

Options:

As to the regulated taking of listed species, there are two options:

- (1) Amend the definition of "conserve" in the ESA to expressly grant the Secretary greater flexibility to allow regulated takings of threatened species.

Pros:

(a) Would eliminate an existing tension between definition of conserve and the Secretary's grant of authority for regulating threatened species in section 4(d).

(b) Could allow commercial activity when this is not a threat to a threatened species.

(c) would eliminate threat of litigation over some conservation programs.

Con:

Could be viewed as a direct attack on the conservation goals of the ESA in that some groups are opposed to the regulated taking of any threatened species.

(2) Leave the language of the statute the way it presently exists.

Pro:

Avoids controversy with those who would see the change as an attack on the overall conservation goals of the Act.

Cons:

(a) Continues to subject the Secretary to threat of litigation concerning certain conservation programs for threatened species.

(b) Would leave unresolved the Secretary's authority to authorize takings in those instances where such takings would be beneficial to a threatened species.

Along with the issue of regulated takings, there is the more general issue of whether additional flexibility should be written into the "purpose" and "definitions" sections to allow the Secretary greater flexibility to enter into compromise conservation plans. The options here are:

(1) Amend the "purpose" section and the definition of "conservation" and grant the Secretary discretion to implement "reasonable" conservation measures for listed species which may not result in the protection of their entire habitat.

Pros:

(a) Clarifies the Secretary's authority to enter into "compromise" conservation plans.

(b) Allows the Secretary more discretion to weigh costs of certain conservation measures.

Cons:

(a) Imposes a less strict burden on the Secretary to protect at all costs all existing habitat of a listed species.

(b) Could generate controversy with those who would see the change as a direct attack on the Act.

(2) Leave the language of the statute as it presently exists.

Pros:

(a) Could be interpreted as requiring stringent protection for all of the habitat of a listed species.

(b) Avoids controversy.

Cons:

(a) Fails to clarify the Secretary's conservation authorities under the Act.

(b) May hinder the development of "compromise" conservation plans.

(c) May not allow Secretary discretion to weigh costs of conservation measures.

New Issue: 11/24/81

REAUTHORIZATION/REGULATORY REVIEW OF THE ESA
Interrelationship of Sections 7 and 9

Issue: Should the ESA be amended to incorporate the Solicitor's Office's conclusion that there is an implied conditional exemption from section 9 for projects that have received a non-jeopardy opinion pursuant to section 7.

Priority: None identified (Appendix I.F.2.b.(8)).

Discussion:

Section 7 of the Endangered Species Act requires all federal agencies to insure that their actions are not likely to jeopardize the continued existence of a listed species or adversely modify its critical habitat. 16 U.S.C. 1536(a)(2). Section 9 of the Act prohibits any person, including Federal agencies, from taking individual specimens of an endangered species. 16 U.S.C. 1538(a)(1)(B).

The issue here is how the two sections of the Act interface. Specifically, if an agency goes through section 7 consultation and receives a "non-jeopardy" opinion from the Service, is it nevertheless prohibited by section 9 from continuing with the project because one member of a species may be taken in the course of a project?

The Solicitor's Office is presently preparing a memorandum on this issue. Although not yet final, the memorandum in draft concludes that there is an implied conditional exemption from section 9 for takings pursuant to a project where: (1) consultation on the project has resulted in a non-jeopardy finding by the Service, and (2) those takings which do occur are incidental, unavoidable takings which do not exceed the scope or nature of any takings discussed during consultation.

The question to be decided here is whether the interpretation of the Solicitor's Office concerning the interrelation of sections 7 and 9 should be added to the Act through statutory revision.

Comments Received:

No comments were received specific to this issue. However, the issue has been raised frequently by non-federal participants in federal actions. For example, developers are often concerned that despite the Service's finding of non-jeopardy under section

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7, a private group will bring suit to halt the development under section 9.

Options:

The options here are as follows:

(1) Make no statutory change but rely upon the Solicitor's Office memorandum as the Departmental position.

Pros:

(a) Adequately addresses the problems at present.

(b) Avoids the possibility of an opposite interpretation being adopted by Congress.

Cons:

(a) Solicitor's Office position is based upon an interpretation of the law, rather than express language in the law.

(b) There is no guarantee that a reviewing court will adopt the position of the Solicitor's Office.

(2) Amend section 7 to incorporate the implied conditional exemption from section 9 found by the Solicitor's Office.

Pros:

(a) Departmental position would then be based upon clear statutory language.

(b) Departmental position would not be vulnerable to opposite judicial interpretation.

Cons:

(a) Not necessary at present as SOL memorandum adequately addresses problem.

(b) Raises possibility of opposite interpretation being adopted by Congress.

New Issue: 11/24/81

REAUTHORIZATION/REGULATORY REVIEW OF THE ESA
Incidental Take

Issue: Should the ESA be amended to allow the incidental take of listed species in all or some specifically designated situations.

Priority: J, Number 29 (Appendix I.H.2.1.)

Discussion:

Section 9 of the Endangered Species Act prohibits all takings of endangered wildlife. 16 U.S.C. 1538(a)(1). The term "take" is defined to mean "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct". 16 U.S.C. 1532(19).

Section 9, then, would prohibit even incidental or unintentional taking of an endangered species. For example, a fisherman who accidentally caught an endangered species of fish would be subject to the penalty provisions of section 11. For an unknowing violation of section 9, the Act provides for forfeiture and a strict liability civil penalty of \$500. In fact, the Division of Law Enforcement has never prosecuted such a case. However, the theoretical possibility of such penalties has caused some states to be reluctant to allow the Service to release experimental populations of listed fish in their waters.

A less theoretical example involves endangered sea turtles. Commercial fishing operations often incidentally take sea turtles in the course of taking other non-endangered species. This has been a serious problem for the National Marine Fisheries Service ("NMFS"). NMFS has promulgated regulations concerning incidental take of threatened species of sea turtles. They are presently reviewing the incidental take problem as it relates to endangered sea turtles.

The issue then is whether the ESA should be amended to allow some sort of incidental, unintentional take. If the answer to this is in the affirmative, the amendment could take several forms, ranging from a statutory exemption for incidental take of all species to an amendment which would grant the Secretary discretion to allow incidental take in certain problem situations, such as the sport-fisher situation.

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It should be noted that present regulations, policies and other suggested legislative changes can solve some of the present problems faced by the Service. The authority to promulgate special regulations for threatened species would include the authority to allow the incidental take of members of experimental populations. In addition, another option paper recommends statutory change which would exempt experimental populations from some prohibitions and requirements of the Act.

However, the problems remain with those species that are endangered and for which special rules cannot be promulgated. Since this is more of a theoretical problem for the Service than for NMFS with its sea turtle problems, the present non-enforcement policy of the Service is one option here.

Comments Received:

There were no comments specific to this issue. It should be noted, however, that discussions with NMFS staff indicate that that agency would strongly oppose any amendment which would weaken their enforcement power over takings of species under their jurisdiction.

Options:

The options here are as follows:

- (1) Amend section 9 to exempt incidental takings of all species.

Pros:

(a) Would solve the sport-fisher, sea turtle and experimental population problems.

(b) Would reflect, in some cases, present law enforcement policy.

Cons:

(a) Would allow incidental take of some very sensitive species, such as the condor or whooping crane.

(b) Would go much further than present problems necessitate.

(c) Would create a great deal of opposition from NMFS and the environmental community.

(2) Amend section 9 to exempt incidental takings in specifically designated circumstances, for example, sport fishers.

Pros:

(a) Would solve present incidental take problems without going further than is presently necessary.

(b) Could avoid areas of controversy with NMFS.

Con:

Lacks flexibility in allowing incidental take in other situations which may become problems in the future.

(3) Amend section 9 to grant the Secretary authority to allow incidental takings in specific situations where such taking would benefit the species.

Pros:

(a) Would limit application of exemption to problem areas.

(b) Would grant Secretary flexibility to handle present and future problems.

(c) Would involve less controversy than above options.

Con:

Any grant of discretion subjects the Secretary to political pressures on both sides.

(4) Leave the situation the way it presently exists.

Pros:

(a) Is adequate to take care of the few substantive problems that have arisen for the Service.

(b) Creates no controversy with NMFS or others.

Cons:

(a) May not be adequate to handle all future problems.

(b) Depends primarily on present law enforcement policy alone.

Revised: 11/27/81

Issue: Does the Secretary of the Interior have the authority to dispose of fish, wildlife, plants and other items forfeited or abandoned under the provisions of the Endangered Species Act administered by him by means of sale.

Appendix B - I.J.2.a.; Priority: None identified.

Discussion:

The Secretary of the Interior has two sources of statutory authority for disposal of items forfeited or abandoned under the Endangered Species Act. The ESA states that upon forfeiture or abandonment of fish, wildlife, property or other item to the United States under the Act, "it shall be disposed of (other than by sale to the general public) by the Secretary in such manner, consistent with the purposes of this Act, as the Secretary shall by regulation prescribe." 16 U.S.C. 1540(e)(3) (emphasis added).

Another statute on disposal authority, the Fish and Wildlife Improvement Act of 1978 ("FWIA"), states that:

Notwithstanding any other provision of law, all fish, wildlife, plants or any other item abandoned or forfeited to the United States under any laws administered by the Secretary of the Interior . . . relating to fish, wildlife, or plants, shall be disposed of by [the] Secretary in such a manner as he deems appropriate (including, but not limited to loan, gift, sale or destruction).

16 U.S.C. 7421 (emphasis added). The two acts, then, are inconsistent as to the Secretary's authority to sell items forfeited or abandoned under the ESA.

The Associate Solicitor for Conservation and Wildlife reviewed the above-cited provisions of the two statutes in a memorandum dated March 10, 1981, (copy attached). He concluded that the Fish and Wildlife Improvement Act provision on disposal was a later-in-time repeal of the earlier ESA prohibition on sale of forfeited or abandoned items. This opinion stated, however, that the decision to sell listed species parts should be made

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on a case-by-case basis, and that the legislative history of the FWIA indicated that the sale of confiscated endangered species parts generally will not be the favored method of disposal.

This conclusion was based upon the explicit language of the FWIA and legislative history indicating that Congress intended to give the Secretary the discretionary authority to sell any item forfeited or abandoned to the United States if the Secretary determined that such sale would be appropriate. It was the conclusion of the Associate Solicitor, then, that the Secretary has the authority to sell any species forfeited or abandoned under the Act, including endangered species and CITES species, although such sales should probably not be favored.

The Associate Solicitor's conclusion is reflected in the Fish and Wildlife Service's recently published proposed disposal regulations. 46 FR 46605 (Monday, Sept. 21, 1981), (copy attached). The Service stated in those regulations that the Secretary has authority to sell any species forfeited or abandoned under the Act. However, the Service indicated that its policy is not to sell species listed as endangered or threatened under the ESA unless those species can be lawfully traded in interstate commerce, as is the case, for instance, with the American Alligator. Furthermore, the Service stated that its policy is not to sell species listed on Appendix I of CITES.

It should also be noted here that the Service's disposal procedures were criticized in a recent Inspector General's report. Citing the large number of forfeited and abandoned items presently being stored by the Service, the report criticized the lack of systematic disposal procedures and the frequency of thefts and misplacement of the items. It is hoped that the proposed disposal regulations, once finalized and implemented, will solve both of these problems.

In light of the above, the Solicitor's Office has raised the issue of whether the Department should seek Congressional ratification of its interpretation of the ESA and the FWIA with regard to sale.

Comments Received:

No comments have been received on this issue in response to the request for public comment on the ESA review. No comments were received on the "sale" aspect of the proposed disposal regulations.

However, it should be mentioned that the Service's counterpart agency in implementing the ESA, the National Oceanic and

Atmospheric Administration (NOAA), disagrees with the Associate Solicitor's conclusion that the FWIA repeals inconsistent disposal provisions in all of the wildlife laws. NOAA recently promulgated disposal procedures which prohibit the sale of marine mammals and endangered species, concluding that the sale of such items is inconsistent with the Marine Mammal Protection Act and the ESA. 46 FR 31648 (June 17, 1981).

Options:

The options here are as follows:

A. Leave the present statutory wording as it is.

Pros:

1. Avoids a change which may be unnecessary as SOL memorandum has adequately addressed disposal problems.

2. Avoids conflict with NMFS.

Cons:

1. Perpetuates inconsistency in the statutes and in the procedures of the wildlife agencies.

2. Since present position is based upon interpretation of statutes, this leaves Department vulnerable to court challenge of disposal regulations.

B. Amend the ESA to remove present statutory provision against sale.

Pros:

1. Grants Secretary flexibility in disposal of forfeited and abandoned items.

2. Consistent with SOL interpretation of FWIA and with Departmental regulations.

3. Eliminates present inconsistency in statutes and in the procedures of the wildlife agencies.

4. Eliminates vulnerability to court challenges of disposal regulations.

Cons:

1. Creates impression that Service is inconsistent in that Service is engaging in sale that is prohibited on the part of the public.

2. May be unnecessary as SOL memorandum adequately addresses disposal problems.

3. Would create conflict with NMFS.

C. Amend the ESA to indicate that certain sales are prohibited notwithstanding the contrary provision in the FWIA.

Pros:

1. Eliminates present inconsistency in statutes and in the procedures of the wildlife agencies.

2. Is consistent with the Act's prohibition on sale of certain species.

3. Avoids conflict with NMFS.

Cons:

1. Eliminates Secretarial flexibility in disposing of forfeited and abandoned items by sale.

2. Is inconsistent with present Departmental position and regulations.

Revised: 12/7/81

Issue: Should the citizen suit provision of 11(g) be retained and, if so, should it be retained in its present form.

Appendix B-I.J.2.b.; Priority: None Identified.

Discussion:

At present, the Endangered Species Act provides that any person may commence a civil suit on his own behalf "to enjoin any person including the United States and any other governmental instrumentality or agency . . . who is alleged to be in violation of any provision of [the] Act or regulation issued under the authority thereof . . ." 16 U.S.C. 1540(g)(1)(A). However, the section provides that no such suit can be initiated unless the Secretary has been given 60 days notice of the suit. Further, a citizen suit cannot be initiated if the Secretary has initiated penalty proceedings concerning the violation. 16 U.S.C. 1540(g)(2)(A).

The issue here is whether the citizen suit provision should be retained. If the answer to this is in the affirmative, the issue becomes whether the provision should be retained in its present form. The Solicitor's Office has initiated discussions with the Department of Justice on this issue. Several questions have evolved from this initial contact, including the following:

(1) Should the present provision be amended to include a standing provision.

(2) Should the present provision be amended to separately authorize mandamus suits on non-discretionary Secretarial actions.

(3) Should the present provision be amended to direct review of certain Secretarial actions to the Court of Appeals.

(4) Should the present provision be amended to limit the venue of citizen suits to the judicial district in which the subject matter of the suit is located.

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Continuation of Citizen Suit Provision

As noted above, the citizen suit provision of section 11(g) authorizes private individuals to sue any person who is alleged to be in violation of any provision of the ESA. The provision, in effect, gives the citizen the status of a "private attorney general" and allows him to bring suit to enforce the provisions of the Act. The citizen suit provision, however, is not the sole source of jurisdictional authority available to private individuals in suits under the ESA. General jurisdictional statutes authorize citizens to sue any federal agency for actions which are "arbitrary or capricious" or for federal actions that fail to meet procedural requirements, if the citizens are injured by such actions.

The citizen suit provision has been used extensively as a jurisdictional basis for suits under the ESA. However, section 11(g) is usually cited along with general jurisdictional statutes to establish jurisdiction in such suits.

Standing

The caselaw is presently unclear as to whether, and what, standing is conferred by section 11(g). While at least one court has interpreted section 11 as not conferring automatic standing upon any person, it is not clear that most courts would require any showing of standing when suit is brought under that section.

In the one case cited, PLF v. Andrus, 13 ERL 1266 (M.D. Tenn. 1979), the District Court indicated that an individual suing under section 11(g) must show that he was at least affected by the action in question. The Solicitor's Office has raised the issue of whether some showing of standing should be required in bringing a citizen suit under section 11. The Department of Justice is presently reviewing this issue. It is our understanding that they will recommend specific statutory change if a standing provision is recommended.

Specifically Authorize Mandamus Actions

It is clear that a citizen suing under section 11(g) can request injunctive relief to prevent or halt a violation of the Endangered Species Act. However, it is not clear whether section 11(g) allows citizen suits to compel the Secretary or another agency to take an affirmative action required by the ESA; in other words, to bring mandamus suits. For example, the

present statutory language clearly allows a citizen to sue to enjoin the Secretary from implementing a legally-deficient listing under section 4. However, it is not clear whether that citizen can sue to compel the Secretary to list a species that meets the listing criteria of section 4.

Although mandamus type actions can be brought in the form of affirmative injunction suits, which are allowed under section 11(g), the Solicitor's Office has raised the issue of whether that section should be clarified nevertheless in regard to mandamus suits. The clarification would involve a revision of section 11(g) to specifically and separately allow injunctive actions and mandamus suits on non-discretionary Secretarial actions.

Standard of Review

The third issue involves the standard of review for actions brought under section 11(g). At present, suits challenging Secretarial actions under the Act, such as a decision to list a particular species, can be brought under section 11(g) of the ESA or under general jurisdictional statutes. These suits are brought in the various District Courts.

Since the ESA sets out no specific standard of review for section 11(g) cases, there is disagreement as to whether the cases should be tried de novo, i.e., with both sides presenting new evidence on the issue, or tried on the existing agency record. Many of the actions taken by the Secretary are the subject of extensive rulemaking processes, for example, listings, designation of critical habitat or granting of permits. The Solicitor's Office has raised the issue of whether these types of Secretarial actions should be reviewed by a Circuit Court of Appeals solely on the basis of the administrative record created on the action using an "arbitrary and capricious" standard, rather than by the District Courts in a sometimes de novo review, as is presently the case. Direct judicial review is used in other environmental statutes. For example, the review of many of the actions of the Administrator of EPA under the Clean Water Act occurs in the Court of Appeals on the record during the decision-making process. 33 U.S.C. 1369(b).

Venue

The fourth issue relates to the venue for section 11(g) suits. The Solicitor's Office has raised the issue of whether section 11(g) should require that cases utilizing that jurisdictional authority be brought in the judicial districts in the areas in

which the subject matters are located. At present, the Act provides only that citizen suits may be brought in such districts.

Comments Received:

No comments specific to the citizen suit provision have been received. However, some industry commentators did speak in general terms of how the ESA was being used to halt developmental projects. The one specific comment received mentioned "purely obstructive" lawsuits. This comment was submitted by the Potlatch Corporation which stated that the ESA, as well as other environmental statutes, "are being used in lawsuits and administrative appeals to further anti-development goals . . ." The Corporation's solution, though, was to revise substantive sections of the ESA, such as the definition of "harm", rather than the provisions of section 11(g).

Options:

Issue 1

The first issue is whether the statutory provision for citizen suits should be retained. The options are as follows:

A. Retain a citizen suit provision in the Endangered Species Act.

Pros:

1. May create additional protection of species through private attorney general actions.
2. Expands opportunity for suit under ESA by reducing standing requirements.
3. Avoids controversy with groups who would see elimination as direct attack on the Act.

Cons:

1. Allows suit on any aspect of the Act without regard to standing, thus, allowing purely obstructive suits.

2. Adds little additional jurisdictional basis to general jurisdictional statutes.

8. Eliminate the citizen suit provision of section 11(g).

Pros:

1. Requires suit under general jurisdictional statutes, thus requiring showing of standing.

2. Present provision adds little additional jurisdictional basis to general jurisdictional statutes.

Cons:

1. May eliminate some additional protection to species through private attorney general actions.

2. Requires plaintiffs to demonstrate standing.

3. Creates controversy with groups who would see this as a direct frontal attack on the Act.

Issue 2

The second issue is whether some demonstration of standing should be required in suits under section 11(g). The options are as follows:

A. Retain present statutory language.

Pros:

1. May encourage suits on benefit to species.

2. Revision may be unnecessary as present language is rarely used without general jurisdictional statute.

Cons:

1. May encourage purely obstructive suits.

2. May add little to general jurisdictional statutes.

B. Revise the ESA to clearly require some showing of standing.

Pros:

1. May eliminate some purely obstructive suits.
2. Present language may add little to general jurisdictional statutes.

Cons:

1. May discourage suits of benefit to species.
2. Revision may be unnecessary as present language is rarely used without general jurisdictional statutes.

Issue 3

The third issue is whether mandamus suits to compel non-discretionary actions under the ESA should be specifically authorized in section 11(g). The options are as follows:

A. Retain present statutory language.

Pros:

1. Since mandamus actions may be brought as affirmative injunctions, revision to specifically allow mandamus suits may be unnecessary.
2. Specific authorization of mandamus suits may encourage such suits.

Cons:

1. Statutory language is presently unclear as to whether mandamus is allowed.
2. Revision to specifically allow mandamus suits may be viewed favorably by environmental community.

B. Revise the ESA to specifically allow mandamus suits.

Pros:

1. Clarifies present language without appreciably adding to number of suits.

2. May be viewed favorably by environmental community.

Cons:

1. May be unnecessary as mandamus suits may be brought as affirmative injunctions under present statute.

2. May encourage some additional suits.

Issue 4

The fourth issue is whether judicial review of certain Secretarial actions should be directed to Court of Appeals review of the existing administrative record using an arbitrary and capricious standard. The options are as follows:

A. Retain present statutory language.

Pros:

1. Allows supplementation of weak record in de novo review.

2. Is necessary where no administrative record is created on a decision.

Cons:

1. May result in situation where decisions which have been the subject of extensive rulemaking processes are tried de novo.

2. May result in lengthy judicial review process.

3. Results in confusion as to standard of review.

B. Revise the ESA to clarify standard of review and direct review of some actions to Court of Appeals.

Pros:

1. Avoids de novo review of decisions which have been the subject of extensive rulemaking processes.
2. Eliminates lengthy review process in some cases.
3. Clarifies standard of review.

Cons:

1. Eliminates possibility of supplementing weak record in de novo review.
2. Impractical in regard to decisions where no administrative record is created.

Issue 5

The fifth issue is whether citizen suits should be required to be initiated in the judicial district in which the subject matter is located. The options are as follows:

- A. Retain the present statutory language.

Pros:

1. Centralized control over cases is maintained.
2. Headquarters staff expertise can be utilized to the fullest in cases of nationwide significance.

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Cons:

1. Cases may be initiated great distances from area actually affected.
2. May make it more difficult to utilize regional resources.

B. Revise the ESA to require that suits be initiated in the judicial district in which the subject matter is located.

Pros:

1. Cases are initiated in area actually affected.
2. Regional resources can be utilized to the fullest extent.

Cons:

1. Centralized control may be more difficult
2. May make it more difficult to utilize expertise of headquarters staff.

Revised: 11/27/81

Issue: Should there be a statement of standards and principles to be utilized by the Solicitor's Office in reviewing petitions for remission of forfeited property.

Appendix B-I.H.2.K; Priority: None identified.

Discussion:

The Endangered Species Act authorizes the Secretary to remit fish, wildlife, plants or other items forfeited to the United States for violations of the provisions of that Act. 16 U.S.C. 40(e)(3)-(5). Regulations contained at 50 CFR Part 12 indicate that the Solicitor's Office has responsibility for remission of items administratively forfeited. Those regulations defer to the Justice Department for the remission of judicially forfeited items. That Part also sets out the process whereby petitions for remission of forfeiture may be filed with the Solicitor's Office. 50 CFR § 12.24.

While petitions for remission of forfeitures must be considered on a case-by-case basis, the Solicitor's Office believes that a general policy concerning review of remission petitions is necessary. A statement of the standards and principles that will be utilized by the Solicitor's Office in reviewing petitions will ensure that the Secretary's discretionary authority to remit forfeited property is exercised fairly. In addition, such a policy will promote public confidence that remission decisions are made rationally and objectively on the merits of each case.

Comments Received:

No comments specific to this issue were received.

Evaluation:

The Solicitor's Office has prepared a draft policy on remission of forfeited property, dated September 14, 1981. That draft was submitted to the Chief, Division of Law Enforcement, and the Associate Director, Federal Assistance, for review. Both requested substantial revision in the policy.

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In a meeting between the three offices and the Department of Justice, it was agreed that the policy would not be finalized by the Solicitor's Office until the Division of Law Enforcement has drafted a seizure and enforcement policy. The basis for this decision is the belief that law enforcement efforts under the Act will be most effective if a policy on remission follows a policy on enforcement and seizure and is limited to a narrow set of circumstances where the exercise of equity is truly warranted. Once Law Enforcement's draft policy is complete, the remission policy will be reviewed and finalized.

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Revised: 11/27/81.

Issue: Should the Secretary of the Interior be granted additional authority to handle civil forfeiture actions under the provisions of the Endangered Species Act administered by him.

Appendix B-I.J.2.; Priority 3, Number 5.

Discussion:

The Endangered Species Act provides for three major types of penalties for violations of the Act: (1) civil penalties; (2) criminal penalties; and (3) forfeiture of fish, wildlife, plants and other items involved in violations of the Act. Under the ESA, the Secretary of the Interior has authority to assess civil penalties. Criminal penalty actions are handled by the Department of Justice in the various District Courts. Civil forfeiture actions under the ESA are governed by section 11(e)(5) which provides that the customs laws shall apply to all forfeitures under the Act. 16 U.S.C. 1540(e)(5).

The relevant customs laws, as contained in the Tariff Act of 1930, 19 U.S.C. 1602-1624, provide the Secretary with authority to administratively forfeit items involved in the violation of the ESA when: (1) the item that is the subject of the forfeiture is valued at less than \$10,000; and (2) the forfeiture is uncontested. 19 U.S.C. 1607-1610. Departmental regulations contained at 50 CFR § 12.22-12.23 implement these provisions. Other forfeiture actions must be initiated in the various District Courts. Because the Department of Justice now exercises litigation authority for the Department of the Interior, DOJ, through the various United States Attorneys, handles District Court forfeiture actions for DOI. Therefore, the U.S. Attorneys have control over which cases are prosecuted and how they are prosecuted.

The issue raised is whether the Secretary should be granted greater authority for civil forfeiture actions. If such issue is answered in the affirmative, the ESA could be revised to provide the Secretary authority to handle additional forfeiture cases administratively or to handle all forfeiture actions, including those presently initiated in the District Courts.

Comments Received:

No comments on this issue were received in response to the request for public comment on the ESA review. Preliminary

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discussion with Department of Justice staff, however, indicates that that Department is likely to oppose the transfer of any forfeiture authority from DOJ to the Secretary.

Options:

The options here are as follows:

A. Retain the present statutory wording which divides jurisdiction over forfeitures between the DOI and the DOJ.

Pros:

1. Present system is adequate to meet needs of DOJ in that there has been no indication that DOJ has been generally unresponsive to recommendations of DOI on forfeiture actions.

2. Saves costs related to trying cases in District Courts or handling additional administrative actions.

3. Avoids conflict with DOJ.

Cons:

1. Divided jurisdiction may result in inconsistency in enforcement efforts.

2. Does not avoid potential situation where U.S. Attorney cannot prosecute "small" DOI cases.

B. Amend the ESA to give the Department of the Interior authority to try some cases in District Court.

Pros:

1. Greater DOI control, resulting in greater consistency in enforcement efforts.

2. Avoids potential situation where U.S. Attorney cannot prosecute "small" DOI cases.

Cons:

1. Results in substantial costs to the Department.

2. Creates conflict with DOJ

3. May not be necessary as DOJ is generally responsive to DOI recommendations on forfeiture actions.

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Revised: 11/27/81

Issue: Should the Secretary of the Interior have authority to remit all fish, wildlife, plants and other items under his jurisdiction that are forfeited under the Endangered Species Act.

Appendix B-I.J.2.C.; Priority 3, Number 3.

Discussion:

The Endangered Species Act authorizes the Secretary of the Interior to remit items under his jurisdiction that are forfeited under the ESA, according to procedures set out in the customs laws. 16 U.S.C. 1540(e)(3). The relevant provision in the customs laws is found in the Tariff Act of 1930 at 19 U.S.C. 1618. That provision sets out general criteria to be used by the Secretary in granting remission.

Although the ESA explicitly grants the Secretary authority to remit items forfeited under the Act pursuant to the customs laws, the Justice Department has argued that Executive Order No. 6166 (June 10, 1933) transferred the remission authority contained in the customs laws to the Attorney General in cases in which judicial proceedings are instituted for forfeiture. This division of authority over remission is reflected in Department of the Interior regulations found at 50 CFR § 12.24.

However, the Solicitor's Office has questioned the continuing validity of the argument that the Secretary lacks remission authority over judicially forfeited items. The Solicitor's Office has taken the position that remission is a form of disposal, and that the ESA and the Fish and Wildlife Improvement Act of 1978 ("FWIA") granted the Secretary absolute authority to dispose of all items under his jurisdiction which are forfeited or abandoned under the ESA. See, Memorandum of the Associate Solicitor, Conservation and Wildlife, dated March 10, 1981, concerning disposal (attached); and Memorandum of the Assistant Solicitor, Fish and Wildlife, dated July 17, 1981, concerning remission (attached).

In light of the above, the Solicitor's Office has raised the issue of whether the Department should seek a statutory amendment specifically granting the Secretary authority to remit all items forfeited under the ESA.

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Comments Received:

No comments on this issue have been received in response to the request for public comment on the ESA review. However, preliminary discussions with Department of Justice staff indicate that the Department will probably oppose elimination of DOJ review of remission petitions for items judicially forfeited.

Options:

The options here are as follows:

A. Retain existing regulations on remission which provide for Department of Justice review of petitions for remission of judicially forfeited items.

Pros:

1. DOI remission of judicially forfeited items may make U.S. Attorneys less willing to prosecute DOI cases.

2. Results in small cost savings in having another agency review remission petitions for judicially forfeited items.

3. Avoids conflict with DOJ.

Cons:

1. No DOI control over remission of judicially forfeited items.

2. Inconsistent with broad disposal authority granted Secretary in the FWIA.

B. Amend the ESA to specifically grant the Secretary authority to remit all items forfeited under the provisions of the Act that he enforces.

Pros.

1. Grants DOI control over all items forfeited under the ESA, resulting in greater consistency in remission.

2. Consistent with broad disposal authority granted Secretary in the FWIA.

Cons:

1. DOI remission of judicially forfeited items may make U.S. Attorneys less willing to prosecute DOI cases.

2. Results in some additional costs.

3. Creates conflict with DOJ.

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Mr. FORSYTHE. Again on critical habitat, is the designation of critical habitat central to the protection of a species?

Dr. HESTER. Under some conditions I think it serves a useful purpose. Under other conditions it perhaps causes a great deal of confusion as to what the term "critical habitat" actually means. It is widely misunderstood, and so it has some advantages and disadvantages, I would say.

Mr. FORSYTHE. You heard Dr. Tate?

Dr. HESTER. Yes, sir.

Mr. FORSYTHE. He was talking about some things that might be reasonable in terms of definitions, interpretations in this?

Dr. HESTER. Yes, sir.

Mr. FORSYTHE. Do you believe that is a matter that needs legislation?

Dr. HESTER. Perhaps, although here again I wonder if maybe some of these things we could do administratively in terms of the regulations to which I referred.

Mr. FORSYTHE. I would like to keep on with that one a little bit, getting back to section 7 versus section 9. I think you indicate maybe not even regulations are administrative procedures, but somewhere in there that you do not foresee that creating a problem. You could handle it on a case-by-case basis, but how about the citizen suit that might get in the way?

Dr. HESTER. I think that regulations would be the best administrative route to handle this question because, then we would be able to spell out exactly how we see the two relate. The distinction I was trying to draw was the danger to an individual of a species as opposed to danger to the species itself. In the section 7 consultation process, it is entirely possible to recognize that an individual of a species might be harmed by an action, but not the species itself, and that was the distinction I was trying to draw. I think that could be a part of the regulatory process.

Mr. FORSYTHE. Well, whatever is done, it would be new information, as it was pointed out, as to the harm to the species, and could not be just based on well, we changed our minds.

Dr. HESTER. That is right. If a new incidence of harm came into being that was not envisioned in the section 7 consultation, it would require a new section 7 consultation.

Mr. FORSYTHE. And that really is where the bulk of this ought to reside if a problem arises.

Dr. HESTER. Otherwise, if there was jeopardy to the listed species, it would result in a finding of jeopardy in the original section 7 consultation. If an opinion of no jeopardy was rendered, it would recognize the harm to an individual, but not to the listed species. I think perhaps the regulation would be a good way to spell all this out.

Mr. FORSYTHE. Thank you, Mr. Chairman.

Mr. BREAUX. Mr. Sunia.

Mr. SUNIA. No questions. Thank you.

Mr. BREAUX. I would like to thank this panel of witnesses representing the various departments involved. I appreciate their testimony. I think it has brought out some areas that we are going to have to make some decisions on with or without the recommendations of the administration. We are under a due date that will not

allow us by regulation to solve some of the problems discussed in 2 days of hearings. The intent of the Chair is to sit down with staff and members of both sides and try to come up with an isolated draft to be used for markup purposes for reauthorization.

We certainly intend to reauthorize the act. We do not have a draft vehicle yet that will be used, but one will be forthcoming shortly. We have introduced that. We will try and then start from scratch with a reauthorization bill which will incorporate some of the suggestions that we have had addressed in the 2 days of hearings before this subcommittee and we will start working from there.

Hopefully we will have an opportunity as we consider this legislation to try to put together the type of coalitions that we were successful in putting together with regard to the Marine Mammal Act. We were able to get the various interest groups involved and through their work and good will on both sides we were able to come up with a draft that I think is a good piece of legislation. Hopefully we will have the same opportunity with regard to the Endangered Species Act. That is the intent of the Chair and the Republican member, Mr. Fcrsythe, and other members of the subcommittee.

That concludes the 2 days of hearings on this subject. We stand adjourned until further call of the Chair.

[Whereupon, at 4:17 p.m., the subcommittee adjourned subject to the call of the Chair.]

[The following was received for the record:]

PREPARED STATEMENT OF THE EDISON ELECTRIC INSTITUTE

The Edison Electric Institute is the association of investor-owned electric utility companies in the United States. Its members serve 99 percent of all customers of the investor-owned segment of the utility industry and 77 percent of all the nation's electricity users.

EEL's members have a substantial interest and concern in the administration and implementation of the Endangered Species Act. Since endangered species are found in and on the air, waters, and lands of all 50 states, the service areas of most electric utility companies are within the habitats for some or many different endangered and threatened species. (This statement refers to both endangered and threatened species as "endangered species" unless a specific distinction is intended.) Many of the facilities and properties of electric utilities, such as reservoirs, steam power plant properties, and power line structures and right-of-ways, provide habitat for and attract endangered species. Electric utilities employ numerous biologists, wildlife experts and pollution control experts to operate these facilities in a manner which is compatible with, protects and promotes the recovery of these endangered species. Examples of this unique relationship are documented in the attached report "Compatibility of Fish, Wildlife, and Floral Resources With Electric Power Facilities" * and the EEL movie "A Second Chance."

EEL offers this statement to assist this Subcommittee in its review of the extent to which the ESA has been effective in achieving its goals and to suggest how the Act could be improved during the reauthorization process.

The sections of the ESA which most directly affect electric utilities, Sections 7 and 9, are largely proscriptive in nature. They focus almost exclusively upon preventing activities which are perceived as harming endangered species. Unfortunately, by reason of the narrow focus of these provisions, it is easy to lose sight of the fact that the ultimate goal of the Act is to promote the recovery of endangered species to such an extent that these species are no longer in danger of extinction. We fully support this goal. We believe that its achievement would be facilitated if the Act were modified to encourage private sector activities which support the recovery of

* The attached report is being kept in the subcommittee files.

endangered species and to eliminate those proscriptive measures which are unnecessary, which discourage private initiatives or which conflict with this goal.

Perhaps the most frustrating aspect of the Act is the inherent contradiction between Section 7 and Section 9. Section 7 permits needed development which requires federal approval to proceed, even if an endangered species may be present in the vicinity of the proposed activity or may be incidentally harmed by the activity, if the consultation process concludes that the proposed activity is not likely to jeopardize the continued existence of the endangered species or result in the destruction or adverse modification of its critical habitat.

Section 9, however, appears to undercut Section 7 through its prohibition of any "taking." This prohibition is stated as absolute. An accidental taking of an egg or larvae of an endangered species or the accidental collision of an individual member of an endangered species with a building, transmission line, or other man-made object could result in severe penalties, no matter what precautions were taken to avoid such accidents. Even if the Fish and Wildlife Service (FWS) determines that a proposed action is consistent with the provisions of Section 7 and even if that action is accompanied by special steps to protect endangered species and to encourage them to propagate and thrive, the potential for applying Section 9 still exists. In the Tellico Dam case, the Supreme Court determined that the ESA should be applied strictly.¹ Lower courts have already been faced with requests to enjoin development activities for anticipated violation of Section 9 even though these activities were determined to be consistent with Section 7.² The Courts to date have avoided construing the relationship between Sections 7 and 9. The decisions have held that the claims were not ripe for resolution because the proposed activities at issue would not be implemented physically for several years. Given the language of Section 9, however, the possibility exists that a court may, rightly or wrongly, hold a utility responsible for any "taking" no matter how infrequent or inadvertent. This could be enough to prevent a utility from proceeding at all with needed energy projects which satisfy the Section 7 requirements. Northeast Utilities, a member company of EEL, is submitting detailed testimony to this Subcommittee about the problems it has experienced because of the contradiction between Section 7 and Section 9.

Appendix A to this statement contains proposed statutory language which seeks to clarify the relationship between Sections 7 and 9.

A second major issue confronting electric utility companies when no Section 7 consultation is conducted is the potential for liability under Section 9 for an accidental and unavoidable event which harms or even kills an individual member of an endangered species. Even if the strongest precautions are taken to avoid such accidents, they cannot be eliminated totally. For example, when a water intake structure is located on a body of water which is habitat for endangered fish, it may be physically impossible to eliminate completely the entrainment or impingement of fish, eggs or larvae. Similarly, although utilities have initiated substantial measures to prevent the accidental contact of endangered birds, particularly raptors, with transmission lines, some such contacts may still occur. Although the government appears to have exercised its prosecutorial discretion to avoid litigation when such accidents have occurred, it is inappropriate to perpetuate a strict liability standard in such accidental situations. No company is comfortable operating in any manner which could be conceived of as a violation of a statutory standard. This discomfort is exacerbated by the possibility that opponents to a project could rely upon such accidental takings to seek relief that the government concludes is inappropriate and could attempt to enjoin activities for reasons unrelated to genuine concern about endangered species. Accordingly, we recommend that the prohibition on taking in Section 9 be modified to exempt these accidental takings.

Another major concern with the Act is that it discourages attempts to promote the recovery of species through the introduction of experimental populations in the wild. Experimental populations, for this purpose, refers to the placement of endangered species into the wild in a free state. Presently, the restrictive provisions of Sections 7 and 9 of the Act apply whenever an experimental population is introduced. Private interests are reluctant to encourage the introduction of experimental populations in areas where those private interests operate facilities because of the possibility that the new population may eventually restrict pre-existing or planned future activities. The following examples demonstrate the problems which might arise.

¹ *TVA v. Hill*, 437 U.S. 163 (1978).

² *California v. Watt* F. Supp. 16 ERC 1729, 1749-1750 (D.C. Cal. 1981); *North Slope Borough v. Andrus*, 486 F. Supp. 332, 362 (D.D.C. 1980) affirmed, but reversed on other grounds, 642 F. 2d 589 (D.C. Cir. 1980).

In order to promote the recovery of endangered bald eagles in New York, the FWS approved the introduction in that State of 21 baby eagles which had been taken from nests in Alaska. These particular eagles were neither threatened nor endangered in Alaska. One of the transplanted bald eagles was electrocuted by contact with an electric power line which was in existence long before that eagle was introduced to New York. However, was that individual eagle really "endangered"? Did its transfer from Alaska to New York vest it with endangered status and thereby the protections of Section 9 of the Act? If a federal agency is asked to permit a new activity in the vicinity of the transplanted group of eagles, must consultation under Section 7 be initiated? If Section 7(a)(2) or Section 9 is applicable, any business would be very reluctant to encourage such otherwise worthwhile experiments.

The FWS has already applied the provisions of Section 7 to an experimental population of whooping cranes. The whooping cranes to which we refer summer in Idaho, winter in New Mexico and migrate seasonally between these locations. These birds were recently transferred to these areas. Their presence has already required a utility to adjust the location of a planned power line right-of-way. Other companies have been required to analyze the potential impact of their activities on this population. Thus, their presence has become a major concern to those siting transmission lines and energy facilities from Idaho to New Mexico. Under these circumstances, companies which are or may become subject to the proscriptions of Section 7 and 9 as to these reintroduced species have a strong disincentive against supporting or encouraging their reintroduction. If suitable habitat owned by companies is not made available for experimental populations, the provisions of the Act prove self-defeating. If these disincentives did not exist, companies could support such experiments without concern about restrictions on their own activities.

In order to eliminate these disincentives, we agree with the recommendation of the International Association of Fish and Wildlife Agencies (IAFWA) that experimental populations should be exempted from the provisions of Section 9 and should be subject to Sections 7(a)(3) and 7(b) in the same manner as species proposed to be listed. We believe that the cumulative impact of those modifications would be extremely beneficial to the recovery of endangered species because they would encourage and facilitate private sector support of experimental populations. Experimental populations would continue to receive considerable protection under Sections 7(a)(3) and 7(b), through coordination with state wildlife agencies and under the many other federal and state statutes protecting wildlife which continue to apply to such populations. Our suggested statutory changes necessary to implement this concept are presented in Appendix B.

A fourth concern about the Act involves the definition of "species." Under the Act, taxonomic categories such as species are defined strictly. Unfortunately, this may cause results at variance with biologic fact. Species are groups of plants or animals that are reproductively isolated from other such groups. Simply, this means that members of different species maintain their genetic integrity under natural conditions and do not interbreed or hybridize with other similar forms. The criteria for recognizing species are clear and in nearly all cases scholars have little difficulty in making a judgment. However, evolution—which involves the creation of new species—is a continuing process and, accordingly there are always borderline cases that may engender legitimate disagreement among experts. In addition it is common to find groups of animals which, at the time of their discovery, were thought to be distinct but, with more research, are later found to be part of a larger, more widespread species.

Taxonomists deal with these cases routinely and without much emotion. But problems can arise when the forms involved in the merging have different legal status. The Mexican duck is an excellent example. In 1967 the FWS listed the Mexican duck as an endangered species. As a result, substantial federal and state investments were planned to protect and promote the recovery of the Mexican duck. However, in 1978, the FWS determined that this classification should be removed because Mexican ducks and common mallards had been interbreeding for hundreds, if not thousands, of years and that the resulting Mexican-like ducks were both numerous and expanding in the range from northern New Mexico to southern Durango, Mexico. 43 Fed. Reg. 32258 (July 25, 1978). As a result, individuals once considered protected by the restrictions of the Act no longer received such protection.

In comparison, extremely small specialized distinctions have been applied to classify different species of snail darters. If a broader approach had been adopted, as occurred with the Mexican duck, some of the problems encountered by Tellico Dam might well have been avoided. While Congress cannot resolve the scientific debate regarding the relative merits of lumping and splitting, we believe it is poor public policy to adopt an excessively narrow definition of "species" for listing purposes.

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Finally, the ESA has not incorporated in the consultation process an effective mechanism to balance social and economic considerations. The fact that the Congress specifically amended Section 7 in 1978 to provide for an exemption process which would permit such factors to be considered suggests that the Congress recognizes that there are situations where such balancing is both necessary and appropriate. We believe that these situations are most likely to occur where there is inadequate reliable scientific information regarding the health and extent of the species involved and the manner in which the proposed action might affect the species. Under these circumstances, any prediction in a biological opinion of the potential effect of a proposed action involves explicit judgments and requires considerable speculation. In such circumstances, it is important for an action agency to take into consideration the benefits of the proposed action and balance these factors against the reliability of the scientific data, the potential effects of the proposed action and the likelihood that such effects would occur.

The current exemption process does not address directly the quality or reliability of the scientific information which is the basis of a biological opinion or the issue of uncertainty. Rather, by its very name and emphasis upon "irresolvable" conflict, the exemption process appears to assume far more reliability and certainty in the consultation process than may be warranted in any particular situation. Moreover, the exemption process is far too difficult and time consuming to invoke. Most companies cannot afford to risk the costs of delay which are necessarily involved in seeking an exemption. To remedy these problems, we recommend that the Act be amended to enable an action agency to weigh the benefits of the proposed action against the reliability of the scientific information which forms the basis of a biological opinion before determining whether a proposed action should be approved. A specific recommended amendment is attached in Appendix C.

Alternatively, we recommend a more expeditious exemption process which permits a decision to be made immediately after the consultation process is complete and which explicitly addresses the quality and reliability of the scientific evidence and the potential likelihood of the effects predicted. We also recommend that this process be termed an "appeal" rather than "exemption" procedure because this more accurately reflects the nature of a proceeding in which the sufficiency of evidence supporting a decision is questioned.

APPENDIX A

In order to eliminate the contradiction between Sections 7 and 9, we propose that the present language in Section 7(o) [16 U.S.C. § 1536(o)] of the Act be deleted and that the following be substituted in its place:

"Notwithstanding Sections 4(d) [16 U.S.C. § 1533(d)] and 9(a) [16 U.S.C. § 1538(a)] of the Act or any regulations promulgated pursuant to such sections, any activity which is necessary to carry out (i) any action for which an opinion has been rendered pursuant to Section 7(b) [16 U.S.C. § 1536(b)] which concludes that such action is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of the critical habitat of such species, or (ii) any action recommended by the Secretary as a reasonable and prudent alternative pursuant to Section 7(b) [16 U.S.C. § 1536(b)] shall not be considered a taking of any endangered or threatened species."

APPENDIX B: EXPERIMENTAL POPULATIONS

We recommend that a new definition for experimental populations be added as subsection 3(7) [16 U.S.C. § 1532(7)] and that the present subsections 3(7) through (21) [16 U.S.C. § 1532 (7) through (21)] be renumbered (8) through (22) [16 U.S.C. § 1532 (8) through (22)].

"(7) The term 'experimental population' means members of an endangered or threatened species which members are introduced by man into a new range, released by man from captivity or taken from habitat where the species is not listed as endangered or threatened and introduced into different habitat where the species is listed as endangered or threatened."

We further recommend that the definitions of endangered species in subsection 3(6) [16 U.S.C. § 1532(6)] and of threatened species in subsection 3(20) [16 U.S.C. § 1532(20)], which would be renumbered as 3(21) [16 U.S.C. § 1532(21)], be amended to exclude individual members of an experimental population.

"(6) The term 'endangered species' means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk

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to man. *This term shall not apply to individual members of a species which are members of an experimental population.*

"(22) The term 'threatened species' means any species which is likely to become an endangered species within the foreseeable future throughout all of a significant portion of its range. *This term shall not apply to individual members of a species which are members of an experimental population.*"

The establishment and management of experimental populations should be addressed in a new subsection 4(f) [16 U.S.C. § 1533(f)], and existing subsections 4(f) through (h) [16 U.S.C. § 1533(f) through (h)], should be redesignated as (g) through (i) [16 U.S.C. § 1533(g) through (i)]. New subsection 4(f) [16 U.S.C. § 1533(f)] should provide:

"(f) **EXPERIMENTAL POPULATIONS.**

Experimental populations shall be designated and managed pursuant to regulations promulgated by the Secretary pursuant to subsection (g) [16 U.S.C. § 1533(g)] of this section and cooperative agreements entered into by the Secretary with any State agency, provided that:

"(1) No experimental population shall be established in any State before a cooperative agreement for such population has been developed with the State agency of such State. Such cooperative agreement shall contain provisions relating to habitats in which the population is to be established, protective measures that will be employed, and such other conservation methods and procedures as are deemed appropriate, and

"(2) Experimental populations shall be subject to the provisions of 7(a)(3) and 7(c) [16 U.S.C. § 1536 (a)(3) and (c)] of the Act as though they are species proposed to be listed, but shall otherwise be exempt from the requirements of section 7 [16 U.S.C. § 1536] of the Act."

Subsection 9(b)(2)(A)(ii) [16 U.S.C. § 1538(b)(2)(A)(ii)] shall be amended by the deletion of the last clause as follows.

"(ii) any progeny of any raptor described in clause (i) [; until such time as any such raptor or progeny is intentionally returned to a wild state]."

The purposes of these amendments is to establish a completely new category for experimental populations. These populations will be managed pursuant to regulations issued by the Secretary and in accordance with agreements the Secretary enters into with the state wildlife agencies in the states where each population will be established. This procedure will provide maximum flexibility for adopting a management plan appropriate to each experimental population and for experimenting with a variety of approaches and procedures that might not otherwise be permitted by the Act. This amendment is consistent with the position of the International Association of Fish and Wildlife Agencies (IAFWA) presented in testimony before this Subcommittee in requiring cooperative agreements between the Secretary and the state wildlife agencies.

We generally agree with the IAFWA position on the treatment of experimental populations under Section 7, except for their willingness to designate critical habitat for such populations with state wildlife agency concurrence. Retention of this provision would discourage private sector support of experimental populations because of the possibility that the establishment of critical habitat for such populations could limit existing or planned future growth.

APPENDIX C

We recommend that Section 7(a)(2) [16 U.S.C. § 1536(a)(2)] be amended as follows:

"(2) Each Federal agency, shall, in consultation with and with the assistance of the Secretary, [insure that] *determine whether* any action authorized, funded or carried out by such agency (hereinafter in this section referred to as an 'agency action') is [not] likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical. [; unless such agency has been granted an exemption for action by the Committee pursuant to subsection (h) of this section.] In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available. *Each Federal agency shall, based upon a balancing of its determination with the benefits of the proposed action, require mitigation measures it determines to be necessary and appropriate, if any, to minimize the likelihood of jeopardy and obtain necessary benefits of the proposed action.*"

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Subsections 7(e) through 7(q) [16 U.S. § 1536 (e) through (q)] should be repealed, except for those portions of 7(o) [16 U.S.C. § 1536(o)] recommended in Appendix A above, which should be renumbered 7(e) [16 U.S.C. § 1536(e)].

PREPARED STATEMENT OF RONALD A. MICHEL, VICE PRESIDENT, NATURAL RESOURCES, NATIONAL CATTLEMEN'S ASSOCIATION

Mr. Chairman, The National Cattlemen's Association represents beef cattle breeders, producers, and feeders across the nation.

We are concerned about the effect of the Endangered Species Act on our ability to produce food and fiber for the American people. We do not believe that the 1979 Amendments to the Act, which established an Endangered Species Committee that could provide certain exemptions, solved the problem that the Act has priority over all programs or national interests. Further changes are needed in Section 7 of the Act to introduce the rule of reason and practicality. We are still a long ways from creating a workable method for balancing the mandates of the Endangered Species Act with the goals of other laws and with the national goals for food and fiber production and for energy growth.

One of our main concerns is the failure to adequately define what is meant by the term "critical habitat." At the present time, critical habitat can include the entire geographical area which can be occupied by the threatened or endangered species. This leads to the naming of millions of acres—and even entire states—as critical habitat of one species or another. In most cases, such a large geographical area is not necessary or justified.

The naming of a critical habitat, of course, not only affects other federal actions or activities, it also has a huge impact on private lands and private actions. As a matter of fact, such a designation infringes upon private rights and actions without compensation to the private owner. In our opinion, the designation of a critical habitat on private lands constitutes a "taking" of the lands with compensation. We believe there should be some provision for compensating a private citizen when his livelihood is taken from him by operation of the Endangered Species Act.

The current Act does allow the Secretary of the Interior to make exceptions to the requirement that the critical habitat must include the entire geographical area which can be occupied by the threatened or endangered species. However, this provision should be strengthened to require the Secretary to consider adverse economic impacts and conflicting needs before a critical habitat is designated.

We also believe it should be made clear that the Endangered Species Act is not an attempt to halt the natural evolutionary process. Many of the reasons in the Act for protecting endangered species have to do with natural causes rather than man's activities. If we attempt to "fool Mother Nature," we will be adding layer upon layer of species, and layer upon layer of "critical habitats," winding up with a contradictory protection program that is unworkable. We also would be unnaturally preventing the natural evolution of new species.

We sincerely hope that this subcommittee will give serious consideration to amending this Act so as to introduce some standard of common sense and reasonableness to the endangered species program.

PREPARED STATEMENT OF CARY FOWLER, THE NATIONAL SHARECROPPERS FUND

By way of introduction, the National Sharecroppers Fund is a 45-year old non-profit organization. We were founded by Dr. Frank Porter Graham, a former U.S. Senator, and others during the Depression to give assistance to southern tenant farmers and sharecroppers. Today we see our mission as serving and promoting the well-being of the family farm. To this end we conduct agricultural research. We offer training programs for small farmers. We offer assistance to various farm organizations and we produce a variety of educational materials.

On October 1 of this year, the Endangered Species Act will lapse unless reauthorized by the President and Congress. The Act protects endangered plant and animal species in a number of concrete ways.

Supporters of the Act argue that rare species are an important part of a healthy ecosystem. Those who wish to weaken the Act point to the economic costs of preservation.

The National Sharecroppers Fund is concerned about the Endangered Species Act, due to the relevance this Act has to agriculture.

Wild relatives of cultivated crops have often provided the plant breeder with genes for resistance to insects and diseases. They have helped breeders adapt crops

to different cultural and climatic requirements and have helped improve the nutritional quality of crops. According to noted geneticist and crop scientist Dr. Jack Harlan of the University of Illinois, tomatoes "could not be grown commercially at all in the U.S." were it not for resistance plant breeders have acquired from wild species. And "the same is true for tobacco at least in the U.S.," according to Dr. Harlan. Potatoes have acquired resistance to eight major diseases from their wild relatives. And sugarcane have been completely salvaged as a commercial crop through the use of wild relatives in breeding programs. Clearly, the wild relatives of our cultivated crops constitute a virtually priceless resource which should be protected and preserved. If available and used, these wild relatives might potentially save farmers millions of dollars in the future through the production of better, more resistance crop varieties.

The Endangered Species Act could and should provide protection to the many rare and endangered wild relatives of our agricultural crops located within the U.S. Using data published in the December 15, 1980 Federal Register, plant scientist Gary Nabhan concluded that the Endangered Species Act could provide protection to over 100 species that are wild relatives of 44 agricultural crops. These crops include: beans, squashes, pumpkins, cotton, sunflower, Jerusalem artichokes, sisal, sweet potato, cassava, millet, avocado, cherry, plum, and potato. A copy of Nabhan's study, entitled "Wild Relatives of New World Crops Considered Endangered or Threatened Species in the United States" is attached as an appendix to this testimony.

We believe that the partial or total exclusion of plants from the Endangered Species Act or other measures designed to weaken the Act would increase the threat of extinction to these wild relatives of crops and would likely create greater burdens to agriculture in the future. Plant scientists and breeders from a number of universities and small seed company owners have expressed these views to the Department of the Interior in the form of a petition.

Plant breeders will tell you that the value of a wild relative to breeding programs of a particular crop cannot be accurately predicted before the need arises. We simply cannot be sure what needs plant breeders will be addressing ten or twenty years from now. Insuring that tomorrow's plant breeders will be able to meet such challenges requires us to preserve the crop genetic resources that constitute the building blocks of all breeding programs. Preserving the Endangered Species Act is one way of safeguarding these valuable and scarce resources.

We ask that you consider the potential impact of the Endangered Species Act on the future of agriculture and do all within your power to see that the effectiveness of this Act is maintained.

WILD RELATIVES OF NEW WORLD CROPS CONSIDERED
ENDANGERED OR THREATENED SPECIES
IN THE UNITED STATES

Introduction

The wild species belonging to the same genus of plants as a domesticated crop can potentially serve as a secondary gene pool for that crop, contributing resistance, hardiness or other qualities to it. For major crops, the transference of one "wild-type" gene for insect or disease resistance into commercial varieties has sometimes led to the savings of hundreds of thousands of dollars (formerly suffered in crop losses) by farmers. Although plant breeders are now responsible for most new transfers of genes from wild species to their domesticated relatives, this process has apparently occurred prehistorically and historically, where crops were grown adjacent to wild populations of plants with which they were cross-compatible.

Our concern here is that too few people realize that many potentially valuable wild relatives of crops are threatened or endangered within the United States and its territories. Too often, government reports give the impression that nearly all genetic resources lie in foreign countries, where we, as American citizens, are virtually powerless in encouraging their in situ protection. What tends to be overlooked is that there are over 100 wild species of plants related to New World crops that are currently threatened by extinction within our boundaries--few of their populations fall within nature conservancy areas, and hardly any have had some of their seeds collected for preservation in seed banks.

If one is concerned about plant extinction and its relation to human well-being, perhaps the following list of plants can provide a focus for action. There is an effort underfoot to drop plants from protection by the regulations established after the Endangered Species Act of 1973; it is critical that people immediately begin to lobby to keep plants under the jurisdiction of this Act, and to strengthen the botanical staff of the U.S. Fish and Wildlife Service's Endangered Species Program. It is also necessary to help establish and manage preserves or conservancy areas where populations of these species occur, and to fight landscape destruction which

threatens their other habitats. Some state native plant societies have begun "Adopt a Plant" programs to help protect, propagate and reestablish endangered species. Finally, it is essential that we have a "back up" system, including collection and storage of viable seeds of these species, in case anything happens to remaining wild populations.

These data were assembled by overlapping three kinds of listings. The list of threatened and endangered plants used was that which appeared in the December 15, 1980 Federal Register. We have added a few to this list based on our own field observations and literature and herbaria searches; these and others not "officially" endangered are set off in parentheses. The choice of genera which included New World domesticated (not merely cultivated) crops was done utilizing sources such as: Robert L. Dressler's The Pre-Columbian Cultivated Plants of Mexico (Harvard University Botanical Museum Leaflets, Vol. 16, No. 6, 1953); Richard I Ford's "Gardening and Farming Before A.D. 100: Patterns of Prehistoric Cultivation North of Mexico" (Journal of Ethnobiology, Vol. 1, No. 1, 1981); and M. W. Simmond's Evolution of Crop Plants (Longman, London, 1976).

Finally, we checked for the species in the genera appearing on both kinds of lists in a winter, 1978 computer printout of species stored in the National Seed Storage Laboratory in Fort Collins, Colorado. If seeds of a species were stored in the NSSL, we have marked its listing with an asterisk-- Very few of these are now stored in Fort Collins, although seeds or nursery stock may be available in other stations of the National Plant Germ Plasm System. We encourage others to help us refine this listing, and grant permission to reprint, distribute or utilize it in any way that potentially contributes to increased public awareness of the challenge ahead of us.

A Survey By
Gary Nabhan

SOUTHWEST TRADITIONAL CROP CONSERVANCY GARDEN AND
SEED BANK, A PROJECT OF MEALS FOR MILLIONS/
FREEDOM FROM HUNGER FOUNDATION SOUTHWEST
PROGRAM, 715 NORTH PARK AVENUE,
TUCSON, ARIZONA.

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COMMON NAME OF NEW WORLD CROPS	SCIENTIFIC NAMES OF CROPS IN GENUS	ENDANGERED OR THREATENED WILD RELATIVES IN GENUS	STATES AND TERRITORIES WHERE FOUND
(parentheses indicate not an official list; * indicates in MSSL collections)			
Dwarf sisal	<u>Agave angustifolia</u>	<u>A. arizonica</u>	AZ
Cantala	<u>A. cantala</u>	<u>A. chiucensis</u>	TX
Henequen	<u>A. fourcroydes</u>	<u>A. eggersiana</u>	VI
Pulque	<u>A. mapisaga</u>		
Pulque	<u>A. salmiana</u>	<u>A. parviflora</u>	AZ
Sisal	<u>A. sisalana</u>	<u>A. schottii</u> var.	AZ
Tequila	<u>A. tequilana</u>	<u>trelessei</u>	
		<u>A. toumeyana</u>	AZ
		var. <u>bella</u>	
		<u>A. utahensis</u>	CA, NV
		var. <u>eborispina</u>	
		<u>A. utahensis</u>	CA, NV
		var. <u>nevadensis</u>	
Grain	<u>Amaranthus caudatus</u>	<u>A. brownii</u>	HI
amaranthus	<u>A. cruentus</u>		
	<u>A. hypochondriacus</u>		
Nance	<u>Byrsonima crassifolia</u>	<u>B. horneana</u>	PR
		<u>B. ophiticola</u>	PR
Jackbean	<u>Canavalia ensiformis</u>	<u>C. centralis</u>	HI
		<u>C. forbesii</u>	HI
		<u>C. haleakalaensis</u>	HI
		<u>C. kauaiensis</u>	HI
		<u>C. kauensis</u>	HI
		<u>C. lanaiensis</u>	HI
		<u>C. makahaensis</u>	HI
		<u>C. molokaiensis</u>	HI

COMMON NAME OF NEW WORLD CROPS	SCIENTIFIC NAMES OF CROPS IN GENUS	ENDANGERED OR THREATENED WILD RELATIVES IN GENUS	STATES OR TERRITORIES WHERE FOUND
(parentheses indicate not an official list; * indicates in WSSL collections)			
		<u>C. munroi</u>	HI
		<u>C. hualaloensis</u>	HI
		<u>C. peninsularis</u>	HI
		<u>C. pubescens</u>	HI
		<u>C. rockii</u>	HI
		<u>C. stenophylla</u>	HI
Huazontle	<u>Chenopodium</u>		
	<u>berlandieri</u>	<u>C. oahuense</u>	HI
	var <u>nuttalliae</u>	var. <u>disospermum</u>	HI
Quinoa	<u>C. quinoa</u> *	<u>C. pekeloi</u>	
Cañahua	<u>C. pallidicaule</u>		
Mexican hawthorn	<u>Crataegus pubescens</u>	<u>C. berberifolia</u>	TX
		<u>C. harbinsonii</u>	AL, GA, TN
		<u>C. stenosepala</u>	TX
		<u>C. utherlandensis</u>	TX
		<u>C. wernerii</u>	TX
Calabash tree	<u>Crescentia cujete</u>	<u>C. portoricensis</u>	PR
Squashes and pumpkins	<u>Cucurbita ficifolia</u> *	<u>C. okeechobeensis</u>	FL
	<u>C. maxima</u> *	(<u>C. texana</u>)	TX
	<u>C. mixta</u> *		
	<u>C. moschata</u> *		
	<u>C. pepo</u> *		
Cotton	<u>Gossypium hirsutum</u> *	(<u>C. tomentosum</u> *)	HI
Sunflower	<u>Helianthus annuus</u> *	(<u>H. anomalus</u>)	AZ, UT
Jerusalem artichoke	<u>H. tuberosus</u>	<u>H. carnosus</u>	FL
		<u>H. debilis</u> ssp. <u>vestitulus</u>	FL

COMMON NAME OF NEW WORLD CROPS	SCIENTIFIC NAMES OF CROPS IN GENUS	ENDANGERED OR THREATENED WILD RELATIVES IN GENUS	STATES AND TERRITORIES WHERE FOUND
(parentheses indicate not an official list; * indicates in NSSL collections)			
		(<u>H. deserticola</u>)	AZ, NV, UT
		<u>H. eggertii</u>	AL, KY, TN
		<u>H. exilis</u>	CA
		<u>H. glaucophyllus</u>	NC, TN
		<u>H. laciniatus</u> ssp. <u>crenatus</u>	NM
		<u>H. ludens</u>	
		<u>H. niveus</u> ssp. <u>tephrodes</u>	CA, AZ
		<u>H. nuttallii</u> var <u>parishii</u>	CA
		<u>H. paradoxus</u>	TN
		<u>H. praecox</u> ssp. <u>hirtus</u>	TX
		<u>H. praetermissus</u>	NM
		<u>H. schweinitzii</u>	NC, SC
		<u>H. smithii</u>	AL, GA
Sweet potato	<u>Ipomoea batatas</u> *	<u>I. cardiophylla</u>	TX
		<u>I. egregia</u>	AZ
		<u>I. krugii</u>	PR
		<u>I. lemmonii</u>	AZ
Cassava	<u>Manihot esculenta</u>	<u>M. davisiae</u>	AZ
		<u>M. walkerae</u>	TX
Prickly pear	<u>Opuntia ficus-indica</u>	<u>O. arenaria</u>	NM, TX
		<u>O. basilaris</u> var. <u>brachyclada</u>	CA
		& var. <u>longiareolata</u>	AZ
		& var. <u>treleasei</u>	AZ, CA
		& var. <u>woodburyi</u>	UT

COMMON NAME OF NEW WORLD CROPS	SCIENTIFIC NAMES OF CROPS IN GENUS	ENDANGERED OR THREATENED WILD RELATIVES IN GENUS	STATES AND TERRITORIES WHERE FOUND
(parentheses indicate not an official list; * indicates in MSSL collections)			
		<u>O. bigelovii</u> var.	CA
		<u>hoffmanii</u>	
		<u>O. borinquensis</u>	PR
		<u>O. imbricata</u> va.	TX
		<u>argentea</u>	
		<u>O. munzii</u>	CA
		<u>O. parryii</u> var.	
		<u>serpentina</u>	CA
		<u>O. phaeantha</u>	AZ
		var. <u>flavispina</u>	
		& var. <u>mojavensis</u>	AZ, CA
		& var. <u>superbospina</u>	AZ
		<u>O. spinosissima</u>	FL, PR, VI
		<u>O. strigil</u> var.	
		<u>flexospina</u>	TX
		<u>O. triacantha</u>	FL, PR, VI
		<u>O. whipplei</u> var.	
		<u>multigeniculata</u>	AZ, NV, UT
		<u>O. virginii</u>	CA
Sonoran Millet	<u>Panicum sonorum</u>	<u>P. Alabense</u>	HI
	(or <u>P. hirticaule</u> var.	<u>P. carteri</u>	HI
	<u>miliaceum</u>	<u>P. fauriei</u>	HI
	domesticated)	<u>P. hirsitii</u>	CA, NJ
		(<u>P. hirticaule</u> var.	AZ, CA
		<u>miliaceum</u> or	
		<u>P. sonorum</u> wild)	
		<u>P. lithophilum</u>	CA, SC
		<u>P. niuhauense</u>	HI
		<u>P. nudicaule</u>	AL, FL, MS

COMMON NAME OF NEW WORLD CROPS	SCIENTIFIC NAMES OF CROPS IN GENUS	ENDANGERED OR THREATENED WILD REALTIVES IN GENUS	STATES AND TERRITORIES WHERE FOUND
(parentheses indicate not an official list; * indicates in NSSL collections)			
		<u>P. pinetorum</u>	FL
		<u>P. stevensianum</u>	PR
Avocado	<u>Persea americana</u>	<u>P. borbonia</u> var. <u>humilis</u>	FL, GA
Tepary bean	<u>Phaseolus acutifolius</u> *	<u>P. supinus</u>	AZ
Runner bean	<u>P. coccineus</u> *		
Lima bean	<u>P. lunatus</u> *		
Common bean	<u>P. vulgaris</u> *		
Husk tomato	<u>Physalis ixocarpa</u> *	<u>P. viscosa</u> var. <u>elliottii</u>	FL
Yellow sapote	<u>Pouteria campechiana</u>	<u>P. sushensis</u> <u>P. rhynchosperma</u>	HI HI
Devil's claw	<u>Proboecidea</u> <u>parviflora</u> var. <u>hohokamiana</u>	<u>P. sabulosa</u>	NM, TX
American plum	<u>Prunus americana</u>		
No. Am. cherry	<u>P. besseyi</u>		
No. Am. cherry	<u>P. pumila</u>	<u>P. geniculata</u>	FL
Capulin cherry	<u>P. serotina</u> var. <u>capuli</u>	<u>P. havardii</u> <u>P. maritima</u> var. <u>gravesii</u> <u>P. murrayana</u> <u>P. texana</u>	TX CT TX TX
Guayaba	<u>Faidium guajava</u>	<u>P. sintonisii</u>	PR
Guayabilis	<u>F. sartorianum</u>		

COMMON NAME OF NEW WORLD CROPS	SCIENTIFIC NAMES OF CROPS IN GENUS	ENDANGERED OR THREATENED WILD RELATIVES IN GENUS	STATES AND TERRITORIES WHERE FOUND
(parentheses indicate not an official list; * indicates in MSSL collections)			
Chia	<u>Salvia hispanica</u>	<u>S. blodgettii</u>	AK
		<u>S. brandegei</u>	FL
		<u>S. greatae</u>	CA
		<u>S. penstemonoides</u>	CA
Pepino	<u>Solanum muricatum</u>	<u>S. bahamense</u>	FL
Sunberry	<u>S. nigrum</u>	var. <u>rugelii</u>	
Lulo	<u>S. quitoense</u>	<u>S. carolinense</u>	
Potato	<u>S. tuberosum</u> *	var. <u>floridanum</u>	LF
		& var. <u>hirsutum</u>	CA
		<u>S. conocarpum</u>	VI
		<u>S. dryophilum</u>	PR
		<u>S. haleakalense</u>	HI
		<u>S. hillebrandii</u>	HI
		<u>S. incompletum</u>	HI
		<u>S. kauaiense</u>	HI
		<u>S. mucronatum</u>	PR, VI
		<u>S. nelsonii</u>	
		var. <u>thomasi</u> - <u>folium</u>	HI
		<u>S. sandvicense</u>	HI
		<u>S. tenuilobatum</u>	CA
		<u>S. woodburyi</u>	PR
"Wild" Rice	<u>Zizania aquatica</u>	<u>Z. texana</u>	TX

PREPARED STATEMENT OF THE WESTERN STATES WATER COUNCIL

The Western States Water Council, comprised of representatives of the governors of 12 western states, has carefully considered the present administration of the Endangered Species Act as previously constructed and interpreted. While recognizing the value to the nation of protecting our endangered and threatened species, various member states of the Western States Water Council have experienced serious problems with the Act which demonstrate critical flaws that require legislative and administrative remedies. The Endangered Species Act, as previously constructed and implemented, has in several cases thwarted effective state water resource development, and threatens to continue to do so in the future even as the western states' limited water resources become increasingly important in meeting essential national needs. Therefore, the Western States Water Council urgently requests that the 97th Congress of the United States and the Reagan Administration carefully reconsider the provisions of the Act and its implementation, and seriously consider the following problems and recommendations for amending the Act and improving its administration to more effectively and efficiently meet express national goals.

CONGRESSIONAL PURPOSE

Problem.—The Supreme Court in *TVA v. Hill* found that the legislative intent of Congress in enacting the Endangered Species Act of 1973 "was to halt and reverse the trend towards species extinction, whatever the cost." Congress evidently disagreed, and subsequently enacted amendments intended to provide the flexibility necessary to allow a balancing of endangered species values with other national needs. However, such measures have only partially achieved the intended flexibility.

Recommendations.—Congressional purpose and policy should be redefined explicitly in Section 2 to state that the conservation of endangered and threatened species should not automatically be undertaken at all costs, but should be considered in concert with other national goals.

LISTING OF SPECIES AND DESIGNATION OF CRITICAL HABITAT

Problem.—Delay and uncertainty with respect to the listing of species and designation of critical habitat have significant economic impacts which need to be more fully addressed by the Act. Further, such actions have been criticized in the past as based on political rather than scientific factors.

Recommendations.—The listing of a species and the designation of its critical habitat should be effected promptly and concurrently, based on existing and readily available information. Further, a forum should be established wherein conflicts over judgments with respect to biological facts can be challenged and resolved. Adjustments could easily be made under the present promulgation process at such time as more accurate information became available. The two year time period provided between initial notice of a proposed listing and final publication of regulations should be reduced. Critical habitat should be designated by the Secretary only after providing ample opportunities for official state comment by the respective governor. Such designation should also follow the required economic impact statement.

RECOVERY

Problem.—The Act provides that endangered or threatened species be protected from such natural factors as disease and predation. Recovery plans are to be prepared and implemented in order to stabilize threatened species populations without addressing the physical and economic feasibility of such recovery efforts.

Recommendations.—The complete conservation of all endangered and threatened species is not physically or economically practicable. Therefore, some prioritization of recovery efforts is necessary within national fiscal constraints. The Act presupposes that there is a significant correlation between the protection of natural ecosystems and the conservation of endangered species. Such a correlation is unproven. Prior to making large investments in potentially expensive conservation efforts. Such as land acquisition, other alternatives need to be considered.

STATE WATER LAW

Problem.—Contrary to express Congressional intent, the Endangered Species Act has been used in the past to directly abrogate the supremacy of state water laws. For example, the Fish and Wildlife Service is presently using the Act in the Colorado River Basin to mandate instream flows, irrespective of the biological needs of endangered species.

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Recommendation.—The Western States Water Council strongly urges Congress to specifically address this growing tendency of federal agencies to use environmental statutes to abrogate states' water laws. The Act should be amended to expressly state that the Act will not be used to allocate water, but such allocations will be accomplished under state laws.

INTERAGENCY COOPERATION

Federal Agency Actions: Problem.—The Act mandates preservation of endangered and threatened species irrespective of primary agency purposes. Such a flat inflexible mandate precludes achievement of a reasonable balance between the value of threatened and endangered species and other important national needs.

Recommendation.—Section 7 should be amended to qualify the present mandate and provide that primary agency purposes be given more weight.

Consultation: Problem.—Current formal consultation procedures exclude direct state and other non-federal participation. While informal consultation has been established, it is inadequate. The consultation process has sometimes been used by the Fish and Wildlife Service to intimidate other interests into accepting unreasonable delays by threatening jeopardy opinions.

Recommendations.—The consultation process needs to be more clearly defined and restructured to provide direct input by non-federal interests directly affected by the relevant agency action. "Good faith" consultation should be more clearly defined. What constitutes initiation of formal consultation should be explicitly stated, and state or permit or license applicants should be allowed to directly request formal consultation.

JEOPARDY OPINION

Problem.—The Secretary's opinion, rendered by the Fish and Wildlife Service, as to the potential jeopardy or lack thereof due to an agency's proposed actions, has been routinely delayed by automatic extension of the consultation process. When finally rendered, such opinions have sometimes in the past lacked factual content and have superficially addressed reasonable and prudent project alternatives.

Recommendation.—The Secretary's opinion should be promptly delivered within the 90 day statutory limit, except as mutually agreed by the agencies and relevant non-federal interests, and should be based on the best existing and readily available information. The Opinion should not be delayed pending the outcome of any required biological assessment. Again, some forum should be established to provide for challenges to scientific and biological claims of the Fish and Wildlife Service, as well as lead to a resolution of the differences and determination of the facts. Lastly, the Act should be amended to specifically allow at this stage for the implementation of reasonable and prudent alternatives mutually agreed to as a means of mitigating project impacts on threatened or endangered species, and thereby avoid jeopardy.

BIOLOGICAL ASSESSMENTS

Problem.—Biological assessments have suffered from the same problems as the jeopardy opinions. They are often unreasonably delayed, and professional judgments leave room for reasonable disagreement. Further, the Interior Solicitor's Office has stated that such assessments should include consideration of a project's cumulative effects, which are difficult to determine. The latter has been used by the Fish and Wildlife Service to justify the issuance, or threatened issuance, of a jeopardy opinion where project impacts are negligible and a scenario including cumulative impacts of all future projects has not been, and possibility cannot be, reasonably determined.

Recommendations.—Again, some forum should be provided to allow for the resolution of differences in professional judgment. However, such assessments must be promptly completed within the six-month statutory limit, and decisions must be made based on the information gathered. Adequate funding is important to the quality of such assessments, but where fiscal constraints preclude a totally comprehensive review, decisions must be made using the best readily available information. Review of a project's cumulative impacts, if appropriate, must be limited in scope and should not delay all development pending approval of an uncertain area-wide development scenario.

Exemption Procedure: Problem.—It appears that the exemption process has not provided the flexibility and balance between environmental and economic values which Congress intended. To our knowledge only three projects have sought exemptions. The Grey Rocks project was approved with specific mitigating measures, the Tellico Dam project was disapproved for economic reasons (which disapproval Con-

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gress later overrode), and the Pittston Refinery project in Eastport, Maine, is as yet unresolved. The exemption procedure is time consuming, cumbersome, imprecise and, rather than facilitate conflict resolution, may stonewall meaningful development.

Recommendations.—Congress should explicitly state that consideration of exemptions should take place after meaningful consultation, within the statutory time period, has failed to resolve conflicts between the values established by the Act and project purposes. The exemptions should not be considered as a matter of last resort following protracted and meaningless discussion within a clouded context of differing interests, or after a particular project's compatibility with all other statutory requirements has been determined. Rather than delay decisions, the process should facilitate timely conflict resolution. To accomplish this objective the process needs to be more clearly defined and shortened to a reasonable period of time.

PREPARED STATEMENT OF B. JOSEPH TOFANI, PRESIDENT, WATER RESOURCES CONGRESS

Mr. Chairman and members of the subcommittee, the Water Resources Congress appreciates the opportunity to present its views concerning the reauthorization of the Endangered Species Act.

I am B. Joseph Tofani, President of the Water Resources Congress. The Water Resources Congress is a nationwide organization dedicated to the wise use and proper management of our water resources. We believe an adequate water supply and water quality for all uses is a necessary ingredient to economic stability and growth of our nation.

After considering the workload before your Committee, as well as all the other Committees and the Congress, we believe it would be in the best interest of all concerned that this year's legislation should be limited to a one-year extension of the Endangered Species Act. Any technical amendments required as the result of your 1978 and 1979 amendments should be considered and acted upon.

Additional reasons for suggesting a one-year amendment is to: (1) provide sufficient time to determine the results achieved to improve the administration of the Act as amended in 1978 and 1979; (2) the Committee should have the benefit of the regulatory reform review being conducted by the Presidential Task Force, under the leadership of the Vice President; and (3) afford the Department of the Interior time to review the programs it has already established in areas and with species presently listed.

The Water Resources Congress asks your consideration of our views on this most important matter and we urge you to take sufficient time so that the Act will work in the best interest of our nation.

COLORADO RIVER WATER CONSERVATION DISTRICT,
Glenwood Springs, Colo., April 7, 1982.

HON. JOHN B. BREAUX,

Chairman, Subcommittee on Fisheries and Wildlife Conservation and the Environment, Committee on Merchant Marine and Fisheries, House Office Building, Annex II, Washington, D.C.

DEAR MR. CHAIRMAN: Enclosed herewith are ten copies of my statement on behalf of the Colorado River Water Conservation District in connection with the recent oversight hearings on reauthorization of the Endangered Species Act of 1973. I hope that the Subcommittee will give careful consideration to our statement in drafting and revising the ESA reauthorization bill.

We appreciate this opportunity to document our experiences under the Endangered Species Act and to suggest what we feel are essential changes in the basic structure and administration of the ESA. Unlike some of the other groups which have testified in favor of amending the Act, our District has experienced and continues to experience real and present "horror stories" under the Act's administration. Moreover, the unique concentration of a number of listed species in western Colorado poses a serious threat to the entire future of water resources management in the Upper Colorado River Basin. We are convinced that most of those who feel the Act is generally working well and that it requires only "fine tuning" are persons who have viewed the Act's administration only from afar. We hope that Congress will not wait until the horror stories are too numerous to document before it acts to remove the crippling burdens imposed by the ESA.

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I would appreciate your including my statement in the official record of the reauthorization hearings. I also ask that in the event the Subcommittee holds any further hearings on the Act's reauthorization, I be informed of the hearings schedule and afforded the opportunity to testify.

Again, thank you very much for the opportunity to comment.

Respectfully submitted,

ROLAND C. FISCHER,
Secretary-Engineer.

STATEMENT BY ROLAND C. FISCHER, SECRETARY-ENGINEER, COLORADO RIVER WATER CONSERVATION DISTRICT, GLENWOOD SPRINGS, COLO.

Mr. Chairman, on behalf of the Colorado River Water Conservation District ("CRWCD" or "District"), of which I am Secretary-Engineer, I welcome this opportunity to submit for the record our views on needed reforms in the basic policies and administration of the Endangered Species Act ("ESA" or "Act").

By way of identification, CRWCD is a public agency created in 1937 by an act of the legislature of the State of Colorado to conserve and protect for Colorado the waters of the Colorado River System to which the State is entitled under the Colorado River Compact. The District covers all of twelve and parts of three other counties within the State on the western slope of the Continental Divide. It holds numerous conditional decrees for the use of water within the State for domestic, municipal, industrial and hydroelectric purpose. The District has held preliminary permits for hydroelectric projects issued by the Federal Energy Regulatory Commission (FERC) under the Federal Power Act, and is currently a license applicant before FERC for a major multipurpose water conservation and hydroelectric project in northwestern Colorado known as the Juniper-Cross Mountain Project.

The District appreciates the importance of preserving diversity in our ecosystem, and the vital role which the ESA plays toward that goal. However, the delays, frustrations and expenses that the District has encountered in pursuing its license application for the Juniper-Cross Mountain Project have led us to conclude that Section 7 of the ESA (16 U.S.C. § 1536) is not working, that the 1978 and 1979 amendments to Section 7 have not really achieved a more balanced administration of the Act, and that nothing short of a major overhaul of Section 7 can effectuate a more sensible approach to the preservation of endangered species. Based on our experience with the Act thus far and the experiences of others which we have observed, we believe that Section 7's shortcomings are several.

First, we think that Section 7(c) as currently drafted and as interpreted by the U.S. Fish and Wildlife (FWS) misallocates the burden of conducting a detailed "biological assessment" upon the agency whose prospective action may affect an endangered or threatened species (hereafter referred to as the "action agency"). As the statute is now written, the Secretary of the Interior (Secretary) initially will inform the action agency whether any listed species or species proposed for listing "may be present in the area of such proposed action." Once the Secretary has identified any such species, however, the action agency is now required to prepare an extensive biological assessment. Although Section 7(c)(1) specifically states that the action agency shall conduct the biological assessment "for the purpose of identifying any endangered species or threatened species which is likely to be affected" by the agency's action (emphasis added), the FWS has interpreted the provision as requiring the agency to go far beyond the mere identification of species likely to be affected. In fact, the FWS's current draft regulations for administering the Act require, in part, that:

When conducting a biological assessment, the Federal agency shall, at a minimum:

"(i) conduct a scientifically sound on-site inspection of the area affected by the action, which must, unless otherwise directed by the Service, include a detailed survey of the area to determine if listed or proposed species are present or occur seasonally and whether suitable habitat exists within the area for either expanding the existing population or potential reintroduction of populations;

"(ii) interview recognized experts on the species at issue, including those within the Fish and Wildlife Service, the National Marine Fisheries Service, State conservation agencies, universities and others who may have data not yet found in scientific literature;

"(iii) review literature and other scientific data to determine the species' distribution, habitat needs and other biological requirements;

"(iv) review and analyze the effects of the action on the species, in terms of individuals and populations, including consideration of cumulative effects of the action on the species and habitat;

"(v) analyze alternative actions that may provide conservation measures;

"(vi) conduct any studies necessary to fulfill the requirements of (i) through (v) above; and

"(vii) review any other relevant information."

[Draft of proposed 50 C.F.R. § 402.11(d)(2).] The FWS draft guidelines also require the action agency to prepare a report documenting the results of its biological assessment. The report must include a discussion of the study methods used and other pertinent information.

We believe it is illogical and unreasonable to put the onus of conducting such a biological assessment solely upon the action agency, which in most cases has no expertise in fish and wildlife matters. In the case of FERC, while that agency does have fishery biologists on its staff, they are not personnel trained in specific fish listed as endangered and FERC has hired consultants to advise on such matters for them. In practice, the burden of supplying data for the biological assessment is passed by the agency to the non-Federal entity which is seeking a license or permit. The project sponsor likewise is usually ill-equipped to perform the detailed functions now required by FWS in a biological assessment, and must of course engage outside consultants to carry out those tasks.

In the case of the District's license application for Juniper-Cross Mountain, the FWS informed FERC under date of October 22, 1980 that the following listed species of endangered animals and plants may occur in the area of influence of the project: bald eagle, American peregrine falcon, Colorado River squawfish, bonytail chub, humpback chub, and Uinta Basin hookless cactus. The Yampa River beardtongue was also indentified as a plant which "may be designated as a proposed species" in the near future, and thus should also be studied. FERC thereafter submitted a data request in April 1981 to CRWCD requiring the District to obtain and report all information necessary to complete a biological assessment for each of these species. In addition to the more "basic" information requested, FERC asked the District to identify spawning and rearing areas or habitat in the Yampa River and in the Green River below the confluence of the Yampa River downstream to Jensen, Utah; to describe the chemical, physical and thermal characteristics of these areas; to identify the seasonal movements and distribution of each of the endangered fishes in the same river stretches; to describe the cumulative effects of this and other projects on each species and its habitat; to describe effects of diurnal water level fluctuation on backwater areas and other habitat types believed to be important to the endangered fishes, etc. All of this required the retention of numerous experts and was accomplished at substantial cost. The data accumulated was submitted to FERC July 29, 1981 and thus far there has been no further word to the District on it.

The question naturally occurs as to why the Act does not designate FWS (or, in appropriate cases, the NMFS) as the lead agency in the preparation of biological assessments. After all, as the agencies which list the species as endangered or threatened to begin with, it is these agencies that ostensibly possess the type of knowledge and expertise necessary to conduct the type of biological assessment which their own draft regulations would require. Utilization of FWS and NMFS and their in-house expertise would expedite and make more economically efficient to biological assessment process. But as the law stands now, once FWS has merely identified any listed species that "may be present in the area" of a proposed project, it is up to the action agency (and thus usually the project sponsor) to complete the biological assessment. There is no requirement that FWS share its expertise during this process. In fact, we as the license applicant have been rebuffed as "premature" in attempts to consult with FWS during the biological assessment process, while project costs have continued to escalate. The illogic of not including the wildlife agencies at the biological assessment stage is highlighted by the further anomaly that the project sponsor is not made party to any of the subsequent consultation process under Section 7(a)(2) of the Act.

An even more fundamental question is whether the § 7(c) biological assessment is needed at all. It should be possible to proceed directly to the biological opinion provided for in Section 7(b) which is what Congress appeared to want to do until Section 7(c)'s duplicating biological assessment somehow got added. As long as FWS is required to list endangered and threatened species and to determine their critical habitats, it would seem that that agency should already have most of the information on the population distribution and habitat patterns of the species which is now required to be compiled in a biological assessment.

The second—and most serious—shortcoming of the existing ESA is its imposition of a virtually absolute veto over any Federal action which is “likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary . . . to be critical . . .” ESA § 7(a)(2). This is not merely a discretionary veto power, but a mandatory one, as the Supreme Court found in the celebrated snail darter case, *TVA v. Hill*. Section 7(a) plainly and simply makes species preservation the most important item on the Federal agenda. It effectively bars the exercise of the jurisdiction of other Federal agencies, which have their own legislative mandates, upon a factual finding by the Secretary of the Interior that a listed species of its habitat may be jeopardized. There is no room for Interior to balance other legitimate social goals against the goal of species preservation.

As you are well aware, Congress undertook a lengthy review of the ESA and its administration in 1978, leading to the Endangered Species Act Amendments of that year.

L. 95-632, 92 Stat. 371 (1978). That effort was undertaken largely as a result of the Supreme Court's holding in *TVA v. Hill*. The major product of the review was the creation of the Endangered Species Committee, a sort of “super agency” whose function is to pass on requests for exemptions from the prohibitions of § 7. But this Committee is hardly an adequate response to the problem of weighing the merits of a potential project, in terms of societal value, against the need to preserve a species. This approach merely superimposes a time-consuming administrative proceeding on an already burdensome regulatory process. In fact, before the seven-member Committee can entertain an exemption application, the application must first go through a seemingly unnecessary preliminary screening by a three-member review board (§ 7(g); 16 U.S.C. § 1536(g)). The 1978 Amendments thus added not just one, but two new tiers to the existent bureaucracy. Moreover, before any part of the exemption process may be invoked, an applicant must have pursued and exhausted every possible administrative remedy within the action agency. See *Pittston Company v. Endangered Species Committee*, 14 ERC 1257 (D.D.C. 1980), where the U.S. District Court held that the exemption procedure was intended to be only a “last resort.” In view of the fact that the exemption procedure is the first stage at which any balancing of the merits of a proposed project versus the need for preservation may legally occur, we question why such a procedure is accorded the lowest priority in the whole legislative scheme.

The exemption committee concept fails on other grounds as well. For one thing, the legislative history shows that the membership of the committee was chosen to reflect a bias in favor of endangered species and therefore, necessarily, a bias against even essential utilization of our Nation's natural resources for the benefit of mankind. Thus, instead of having its project reviewed by a Committee with a balanced range of interests, the exemption applicant can hardly expect even an impartial consideration by the Committee of the relative merits of a proposed activity. This is particularly unfair in view of the bias on endangered species already built into § 7(a). And in practice, the Committee clearly has not functioned as Congress intended it to. After refusing to exempt the TVA's Tellico Dam project, the subject of the *TVA v. Hill* litigation, the Committee was abruptly reversed by Congress, which went ahead and authorized completion of the dam despite the project's tortuous history. The Committee has yet to pass upon another full-fledged exemption application, because the Graylocks Dam proceeding that came before it was essentially settled (at enormous expense) by the parties beforehand, and the *Pittston Company* case cited above was sent back to EPA under the “last resort” doctrine for yet another administrative determination.

We feel that a further amendment to § 7 is the only way to restore the balance that existed prior to the passage of the ESA amendments in 1973, between the need for preservation, on the one hand, and the other goals of our society on the other. This balance can be restored only by amending § 7 to remove the flat prohibition against agency action which is likely to jeopardize the existence of endangered and threatened species or result in destruction or modification of habitat. Consultation and cooperation between Interior and the agency involved could still be required in furtherance of the purposes of the Act, and steps such as recovery plans and mitigation and enhancement measures might be required. But the action agency should be given the ultimate authority to balance the interests involved and determine whether a project should be carried forth, subject, of course, to judicial review.

In summary, we believe it is essential that the ESA be amended to accomplish the following fundamental reforms: (a) remove the biological assessment requirement of § 7(c) or at least make FWS and NMFS the lead agencies responsible for conducting and/or supervising the biological assessment process; (b) remove the inflexible provi-

sion that a mere factual determination by the Secretary that a species or its habitat is likely to be adversely affected shall put an end to a Federal agency action absent a Committee exemption; and (c) put the ultimate decision-making where it belongs—with the action agency.

We believe that all of these objectives are not only admirable but essential. It is clear that none of these objectives is being accomplished by the ESA as it presently stands on the statute books. Instead it lends itself too conveniently to be utilized as an obstructionist tool by special interest groups, however well intended they may be. We urge the Committee to amend the Act, specifically § 7, so that economic and social interests can be taken into account from the outset, along with species preservation, in determining whether a federal action may be undertaken.

Thank you for the opportunity to comment.

MISSOURI DEPARTMENT OF NATURAL RESOURCES,
Jefferson City, Mo., March 25, 1982.

HON. REPRESENTATIVE JOHN B. BREAUX,
Chairman, House Subcommittee on Fisheries and Wildlife Conservation and the Environment, U.S. House of Representatives, Washington, D.C.

DEAR REPRESENTATIVES BREAUX: We are pleased to offer comments on the reauthorization of the Endangered Species Act for the Subcommittee's hearing record. The Missouri Department of Conservation has general responsibility for Missouri's Endangered Species Program with authority provided in MRS C.252, S.240. The Department of Natural Resources is vested with legal authority for preservation and management of nearly 100,000 acres of state park lands (MRS C.253, S.10) which include habitat for a number of species listed as rare or endangered at both the state and federal levels. Through our special ecological management policy, we have made every effort to identify and protect these habitats on state park lands. Missouri state parks contribute toward the effort of protecting species diversity with the highest priority given to protecting rare elements of our natural heritage. Our Department is concerned that the Endangered Species Act be reauthorized because we have been very impressed with its provisions as applied to state park lands. We hope the Act will continue to provide a strong, effective and legal method for the preservation and recovery of plants and animals threatened with extinction.

There are specific provisions of the Act we will address as they apply to state park lands. It is important that all eligible species of plants and animals be given an equal opportunity for listing and protection. It is our understanding that suggestions have been made to give priority protection to the so-called higher-forms of life.

We feel there is no scientific evidence or valid human reasoning which indicates that a mammal or bird is more important than a plant or invertebrate. State park lands include complex ecosystems with a full range of life forms represented. Our responsibility is to afford the survival of all species without regard to their rank on the evolutionary scale. We hope that all of these species can be eligible for protection under the Endangered Species Act.

A fundamental section of the Act requires that federal agencies ensure their actions (funded, carried out, or authorized) do not jeopardize the continued existence of any federally listed endangered or threatened species, or destroy their critical habitat. This Section 7 must remain strong as a very basic indication of our willingness to protect species from potentially damaging activities of our own government. Federal projects have in the past and will continue in the future to impact state park resources. It is vital that the Endangered Species Act continue to apply to such actions.

The Act should continue to authorize the acquisition of habitat for endangered and threatened species. The Department of Natural Resources, when acquiring land for state park purposes, sometimes addresses tracts containing critical habitats for state or federally listed endangered species. In the past, federal funds have made a vital contribution toward state park acquisitions. We recommend that state park land acquisition projects be considered eligible for Endangered Species Act funding assistance where habitat considerations make such assistance appropriate.

We appreciate the opportunity to comment. Our staff will continue to follow the progress of reauthorization of the Endangered Species Act through Congress.

Sincerely,

FRED A. LAFSER,
Director.

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NATURAL RESOURCE BIOLOGISTS ASSOCIATION,
Rancho Cordova, Calif., March 8, 1982.

Hon. JOHN B. BREAUX,

Chairman, House Subcommittee on Fisheries and Wildlife Conservation and the Environment, House Office Building, Washington, D.C.

DEAR CONGRESSMAN BREAUX: The concerns which prompted the initial passage of the Endangered Species Act are still with us. Many species have been identified as Threatened or Endangered but few of these have made a recovery. Not all species threatened with extinction have been officially recognized. Continued loss and degradation of habitat will threaten species not presently endangered. Without the protection of the Endangered Species Act, many of the advances of the past few years will be lost and endangered species will be unnecessarily lost.

For these reasons we strongly urge the reauthorization of an intact or stronger Endangered Species Act.

When the Endangered Species Registration was originally passed, it was recognized that numerous animal species were threatened with extinction primarily through loss of their habitat from a variety of human actions. Plant species were included later. Many species and the source of their danger have been identified since the passage of the Endangered Species Act and efforts have been initiated for their recovery. The Endangered Species Act has been instrumental in calling attention to and providing protection for these species; however, the basic causes for endangerment of species—conflicting demands on limited natural resources—continued.

There are still species which are threatened by extinction but have not yet been legally recognized as Threatened or Endangered. Because habitat loss continues, species which are not presently endangered will likely become so. They will need the protection presently available through the Endangered Species Act.

Many of the advances in the protection of endangered species will be lost if the Act is not reauthorized. Without the protection of the Act, many species, both listed and presently unlisted, will become extinct. Recent surveys indicate that the general public remains supportive of endangered species protection.

We oppose the weakening of the Act by rumored amendments which would exclude certain taxonomic groups from its protection. All species are integral parts of natural ecosystems upon which the higher vertebrates, including man, ultimately depend.

Some invertebrate species are much more sensitive to environmental degradation than vertebrates. These species can be utilized as indicator species to provide an early warning system to changes in the environment which if allowed to progress unchecked will eventually seriously affect mankind.

The diversity of species presently inhabiting the earth are a genetic reservoir which has immense potential for the benefit of mankind. Certain species, as yet unidentified, may provide the clue leading to the discovery of a disease resistant agricultural plant or a cure for cancer or some other disease.

Please include this letter in the record for the public hearing on the Reauthorization of the Endangered Species Act.

Sincerely,

EARLE W. CUMMINGS,
President.

SOUTH CAROLINA WILDLIFE & MARINE RESOURCES DEPARTMENT,
Columbia, S.C., March 15, 1982.

Hon. JOHN B. BREAUX,

*Cannon House Office Building,
Washington, D.C.*

DEAR CONGRESSMAN BREAUX: As you are aware from early hearings on the Endangered Species Act reauthorization, the International Association of Fish & Wildlife Agencies has proposed that any appropriations to carry out the Act be shared with the states on a $\frac{1}{3}$ - $\frac{2}{3}$ basis. Speaking as both the President-Elect and the Executive Director of the S.C. Wildlife and Marine Resources Department, I would like to express my support for this proposal.

Although we have an obvious self-interest in seeing this proposed amendment enacted, the point has been made many times that the States are the basic source of information on the status of endangered species and of the management expertise needed to bring about their recovery. In South Carolina we are obtaining basic management data on the Bald eagle and Loggerhead sea turtle and are obtaining the

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information necessary to support changing the status of the American alligator. In addition, our staff members fill key positions on the Loggerhead sea turtle and Bald eagle recovery teams, whose plans and their implementation have been given a high priority by the Fish and Wildlife Service. If some degree of federal funding is not maintained, these activities probably will have to be discontinued.

It is inconceivable to me that the federal government can meet its objectives under the Endangered Species Act without the active participation of the states. Since the states are affected by federal actions under the act such as the listing of the American alligator, it is only proper that the states have the capability to obtain the information needed to support or modify federal actions and to effectively manage the species which reside in the various states. Without this capability the Fish and Wildlife Service will not have adequate information to make decisions and will not have the capability to carry out its recovery plans.

Although there is no shortage of recommendations for changes to the Act, I encourage you to give a high priority to enacting some form of the appropriation-sharing proposal. My staff and I would be pleased to provide you with any additional information you might need.

Thank you for your continuing support and interest in Fish and Wildlife affairs.
Sincerely,

JAMES A. TIMMERMAN, Jr.,
Executive Director.

TRAFFIC (U.S.A.)
Washington, D.C. March 22, 1982.

Hon. JOHN BREAUx,
*Chairman, Subcommittee of Fisheries, Wildlife Conservation and the Environment
Committee on Merchant Marine and Fisheries House of Representatives Wash-
ington, D.C.*

DEAR CONGRESSMAN BREAUx: We respectfully submit the following testimony in support of a full 3-year reauthorization of the U.S. Endangered Species Act.

TRAFFIC (U.S.A.)—Trade Records Analysis of Flora and Fauna in Commerce—is a scientific, information gathering organization monitoring the international trade in wildlife and plants. We are a program of the World Wildlife Fund-U.S. and a Specialist Group of the Species Survival Commission (SSC), International Union for Conservation of Nature and Natural Resources (IUCN).

Since our inception in April 1979, we have analyzed Trade documents and published wildlife and plant trade reports relating to: 1) the volume of trade in relation to species' status in the wild, 2) violations of U.S. and foreign legislation, and 3) trade routes. Our close working relationship with the law Enforcement Division and Wildlife Permit Office of the Fish and Wildlife Service, Department of the Interior, and the Animal and Plant Health Inspection Service (APHIS), Department of Agriculture has given us a first hand opportunity to observe the working mechanisms of the U.S. Endangered Species Act.

The U.S. Endangered Species Act is an important law for the preservation of endangered and threatened species worldwide. We believe the Act has proven to be extremely effective in benefiting endangered and threatened animals and plants in the U.S. and abroad.

Our information reveals that the United States consumes, by far, more wildlife and plants than any other country in the world, based on both volume and declared value. The U.S. annually imports over a half million each of live reptiles and birds, over 100 million tropical fish, and approximately 165 million plants. In addition, the U.S. imports over 150 million raw and manufactured items of wildlife each year. It has been argued that foreign species should be excluded from coverage by the Act. However, as the number one exploiter of wildlife and plant resources worldwide, the U.S. has a responsibility for identifying and preserving the endangered and threatened wildlife in other countries. Therefore, TRAFFIC (U.S.A.) strongly supports listing of foreign species under the Act.

The Endangered Species Act afforded protection to species threatened with extinction worldwide six years prior to the implementation of CITES by prohibiting commercial trade. The tables appended to this testimony show trade figures for certain species before their listing on the Act. For example, the spotted, cats, once abundant throughout their range, became scarce in the 1960's for use in fur coats and other products. In 1968 alone, the U.S. imported 1,300 cheetah, 13,500 jaguar, and 129,000 ocelot skins, all species now listed as endangered under the Act.

The use of primates for biomedical and pharmaceutical research, the pet trade, and zoos provide additional examples of how trade has diminished the wild populations of several species. Between 1968 and 1972, over 17,000 primates subsequently listed as endangered or threatened under the Act entered the U.S. The U.S. imported over 1,850 chimpanzees between 1968 and 1976, prior to their listing in 1977. Between 1966 and 1978, approximately 728,000 kilograms of wild sea turtle meat entered the U.S. Sea turtles are threatened with extinction for commercial use of many of their parts: the shell is carved into jewelry and ornaments, the skin is tanned for leather products, the meat is used for steak and soup, and the oil is used as cosmetic base. By June 1978, the U.S. had designated all sea turtles as endangered or threatened, thus banning their commercial import in this country.

The listing procedure of the Act is critical not only to species native to the U.S., but also for foreign species. The scientific evidence collected for the Act has enabled several developing nations to identify species threatened with extinction within their countries. Many of these countries lack the resources needed to identify their own rare species or to establish trade controls. In a time when increasing numbers of species are vanishing every year, it is imperative that we secure information on foreign and U.S. species that are endangered or threatened either by trade, habitat destruction, or other factors. The listing process must continue at an accelerated rate, not a diminishing one.

In many cases, foreign studies sponsored under funds provided by the Act have spurred a host country to take further measures to conserve endangered and threatened species within their own country. For instance, the first comprehensive study of the African elephant was produced by Iain Douglas-Hamilton in a report contracted by the U.S. Fish and Wildlife Service (FWS). The contract included a study of the status and range of the African elephant in 35 countries where it is still found and an analysis of poaching operations. The report included a four-volume analysis by Ian Parker on international trade in ivory. As a result of this study, the IUCN developed and implemented a worldwide elephant action plan. In addition, CITIES has adopted many of the recommendations made on how to indelibly mark raw elephant ivory to prevent illegal trade in poached tusks.

Under the Act, the FWS has funded several studies of endangered marine turtles. The FWS was a major sponsor of the World Conference on Sea Turtle Conservation held at the State Department in November 1979. Over 300 sea turtle experts attended the conference and developed a plan of action to save these rare and valuable animals. Several non-governmental organizations including the World Wildlife Fund-U.S. and the Center for Environmental Education are now funding projects identified at the conference as necessary for sea turtle conservation.

Thus, studies funded by monies from the Endangered Species Act have had a large effect on providing information and programs for preserving endangered animals found in other countries. In many cases, these studies spur the host country(ies) to take further protective measures for endangered species within their own country.

Two foreign plants have also benefited from protection under the Act. The Chilean false larch, a tree native to South America, was listed as threatened in 1979 to help stop the flow of timber from this tree into the U.S. Timber from the Chilean false larch is highly prized for its durability, and was harvested illegally from national parks in Chile. The Guatemalan fir, also listed as threatened in 1979, was disappearing due to Central American lumber exports to the U.S. and other countries, in addition to its local use as firewood and Christmas trees. Once common, the tree is now threatened with extinction.

Listing of foreign species should continue. At the present time, several foreign plants and animals are candidates for listing. Most have been under review for several years now. The African elephant and sea turtles examples cited previously provide support in listing foreign species.

Listing of plant species has always lagged far behind listing of animal species. For foreign plants, this problem is particularly acute. The U.S. annually imports nearly 10 million cacti and 200,000 orchids, including over 600 species of cacti and 1,000 species of orchids. In light of such large numbers, it is probable that many wild-collected plants native to other countries end up in U.S. commerce.

Included in the above import figures are well over 8,000 specimens of Mexican cacti, including the Mexican living rock cactus, the aztec cactus, and the pinecone cactus, all considered extremely rare by the Mexican authorities, but not yet proposed for listing under the Act. Also common in U.S. horticultural trade are several species of cycads, native to South Africa and considered as endangered or threatened by the IUCN, and many species of rare South American and Asian orchids.

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Biologists suspect that many of these are collected from wild populations, thus posing a threat to potentially valuable plants native to other countries.

Even today, many foreign endangered and threatened animals are listed on the Act that are not protected adequately by CITES. For example, a yacare caiman, *Caiman crocodilus yacare*, is listed as endangered under the Act. While the U.S. does not allow commercial import of skins and manufactured products of this subspecies, thousands of raw skins of the endangered yacare caiman are entering Europe and Japan because the subspecies is not listed on CITES Appendix I.

Endangered species listed under the Act receive more protection than do CITES-listed species. Indeed, listing of traded species under the Act has sometimes led to successful species' recoveries. CITES does not afford this type of protection. One successful ESA recovery program followed the listing of the American alligator as endangered in 1973. State-managed programs, funded in part by the ESA, have brought populations back to sufficient numbers so that today, commercial trade in skins of the American alligator is once again possible.

Another very important distinction between those species listed on ESA and CITES is that the Endangered Species Act protects native endangered and threatened species from interstate trade, a problem not addressed by CITES. Particularly important here are the 51 native endangered and threatened plants already listed under the Act. Nearly half of these plants are currently threatened by trade, such as the Chapman rhododendron, the green pitcher plant, and the 21 native cacti. Plants currently proposed for listing include 25 orchid species, 17 mariposa lilies, 6 pitcher plants, the Venus flytrap, and 10 species of hibiscus. Their listing would prevent interstate trade in wild specimens of these potentially endangered species.

Even those native plant species desired for commercial trade and listed under the Act fail to receive adequate protection since the Act only controls interstate trade of plant species and does not address their taking or intrastate trade. This means an endangered plant can be uprooted and transferred or sold throughout any one state without penalty under the Act.

TRAFFIC (U.S.A.) strongly supports the listing of endangered and threatened species regardless of their taxonomic classification or their "value" to humanity. Species are no more nor less endangered depending on their taxonomic hierarchy. Because of many environmental factors and trade pressures, many so-called lower plant and animal forms are severely threatened. These include species of butterflies, shells, corals, reptiles, cacti, and orchids, and carnivorous plants.

Finally, it is essential to continue implementation of CITES under the Act as a major tool for international species' conservation and monitoring. The Scientific and Management Authorities here in the United States provide a strong leadership role worldwide, and set examples on how other countries can best implement the international trade convention, CITES.

In summary, TRAFFIC (U.S.A.) supports: Continued and increased listing of foreign species of plants and animals under the Act; increased protection from taking and intrastate trade as these terms refer to plant species; continued listing for all endangered and threatened plant and animal species, regardless of their taxonomic ranking or their potential economic value; and continued strong implementation of CITES under the Act.

Thank you for the opportunity to submit these comments.

Sincerely,

LINDA McMAHAN, PH. D.,

Acting Director.

DAVID S. MACK,

Assistant Director.

Live primates imported into the United States between 1968 and 1972, and subsequently classified as endangered under the Endangered Species Act

	Quantity imported
Lemuridae:	
<i>Cheirogaleus</i> spp. (dwarf lemurs).....	3
<i>Hapalemur</i> spp. (gentle lemurs).....	3
<i>Lemur</i> spp. (lemurs).....	114
<i>Lepilemur</i> spp. (sportive lemurs).....	1
<i>Microcebus</i> spp. (mouse lemurs).....	17
Indriidea: <i>Propithecus</i> spp. (sifakas).....	11
Callitrichidae:	
<i>Callimico goeldii</i> (Goeldi's marmoset).....	179
<i>Leontopithecus</i> spp. (golden tamarins).....	349

	Quantity imported
<i>Saguinsu oedipus</i> [= <i>geoffroyi</i>] (cotton-top tamarin)	13,749
Cebidae:	
<i>Alouatta palliata</i> [= <i>villosa</i>] (mantled howler)	362
<i>Cacajao</i> spp.	214
<i>Chiropotes albinasus</i> (white-nosed saki)	28
<i>Saimiri oerstedii</i>	6
Cercopthecidae:	
<i>Cercocebus torquatus</i> (white-collared mangabey)	35
<i>Cercopithecus diana</i> (Diana or rolaway monkey)	99
<i>Macaca silenus</i> (lion-tailed macaque)	20
<i>Nasalis larvatus</i> (proboscis monkey)	20
<i>Papio</i> [= <i>Mandrillus</i>] <i>leucophaeus</i> (drill)	9
<i>Papio</i> [= <i>Mandrillus</i>] <i>sphinx</i> (mandrill)	57
<i>Pygathrix nemaeus</i> (douc langur)	35
Hylobatidae:	
<i>Hylobates</i> spp. (gibbons and siamangs)	753
<i>Gorilla gorilla</i> (gorilla)	26
<i>Pan</i> spp. (chimpanzees)	1,171
<i>Pongo pygmaeus</i> (orangutan)	4

Source: "Mammals Imported into the United States in 1968 (1969, 1970, 1971, 1972)," Special Scientific Reports—Wildlife Nos. 137, 147, 161, 171, and 181, Fish & Wildlife Services, U.S. Department of the Interior *Live birds imported into the United States between 1968 and 1972, and subsequently classified as endangered under the Endangered Species Act*

	Quantity imported
Struthioniformes:	
<i>Struthio camelus spatzi</i> (Western African ostrich)	306
<i>Struthio camelus syriacus</i> (Arabian ostrich)	
Pelecaniformes: <i>Pelecanus occidentalis</i> (brown pelican)	116
Ciconiiformes: <i>Ciconia ciconia boyciana</i> (white oriental stork)	¹ 23
Anseriformes:	
<i>Branta canadensis leucopareia</i> (Aleutian Canada goose)	¹ 65
<i>Branta sandvicensis</i> (Hawaiian goose, nene)	112
Falconiformes:	
<i>Vultur gryphus</i> (Andean condor)	11
<i>Harpia harpyja</i> (harpy eagle)	9
<i>Falco peregrinus anatum</i> (American peregrine falcon)	¹ 463
Galliformes:	
<i>Macrocephalon maleo</i> (Maleo megapode)	4
<i>Colinus virginianus ridgwayi</i> (masked bobwhite)	¹ 2,402
<i>Crossoptilon manchuricum</i> (brown-eared pheasant)	3
<i>Syrnaticus mikado</i> (mikado pheasant)	4
Gruiformes: <i>Grus monacha</i> (hooded crane)	12
Charadriiformes: <i>Himantopus himantopus knudseni</i> (Hawaiian stilt)	¹ 7
Columbiformes: <i>Columba palumbus azorica</i> (Azores wood pigeon)	2
Psittaciformes:	
<i>Aratinga guarouba</i> (golden parakeet)	106
<i>Amazona guildingii</i> (St. Vincent parrot)	19
<i>Amazona imperialis</i> (imperial parrot)	7
<i>Amazona leucocephala</i> (Cuban or Bahaman parrot)	4
<i>Amazona vinacea</i> (vinaceous-breasted parrot)	208
<i>Neophema pulchella</i> (turquoise parakeet)	63
<i>Neophema splendida</i> (scarlet-chested parakeet)	124
<i>Pionopsitta pileata</i> (red-capped parrot)	1,713
Trogoniformes: <i>Pharomachus mocinno mocinno</i> (resplendent quetzal)	¹ 44
Coraciiformes: <i>Rhinoplax vigil</i> (helmeted hornbill)	2
Passeriformes:	
<i>Carduelis</i> (= <i>Spinus</i>) <i>Cucullatus</i> (red siskin)	20
<i>Pyrrhula pyrrhula murina</i> (San Miguel finch)	¹ 589
<i>Picathartes gymnocephalus</i> (white-necked rockfowl)	24
<i>Leucopsar rothschildi</i> (Rothschild's starling)	57

¹ May include other nonendangered subspecies.

Source: "Birds Imported into the United States in 1968 (1969, 1970, 1971, 1972)," Special Scientific Reports—Wildlife Nos. 136, 148, 164, 170, 193, Fish and Wildlife Service, U.S. Department of the Interior.

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Live reptiles imported into the United States in 1970-71, and subsequently classified as endangered under the Endangered Species Act

	Quantity imported
Alligatoridae:	
<i>Alligator sinensis</i> (Chinese alligator).....	1
<i>Caiman crocodilus apaporiensis</i> (Apaporis river caiman) and <i>Caiman crocodilus yacare</i> (yacare caiman).....	¹ 249,208
<i>Melanosuchus niger</i> (black caiman).....	8
Crocodylidae:	
<i>Crocodylus acutus</i> (American crocodile).....	73
<i>Crocodylus moreletti</i> (Morelet's crocodile).....	2
<i>Crocodylus niloticus</i> (Nile crocodile).....	8
<i>Crocodylus porosus</i> (saltwater crocodile).....	37
<i>Osteolaemus tetraspis osborni</i> (African dwarf crocodile).....	¹ 49
<i>Tomistoma schlegelii</i> (tomistoma).....	90
Cheloniidae:	
<i>Caretta caretta</i> (loggerhead sea turtle).....	1
<i>Chelonia mydas</i> (green sea turtle).....	906
<i>Eretmochelys imbricata</i> (hawksbill sea turtle).....	2
<i>Lepidochelys olivacea</i> (olive ridley sea turtle).....	480
Emydidae:	
<i>Batagur baska</i> (river terrapin-tuntong).....	1
<i>Geoclemmys (-Damonina) hamiltoni</i> (spotted pond turtle).....	23
<i>Geomyda tricarinata</i> (three-keeled Asian turtle).....	1
Pelomedusidae: <i>Podocnemis expansa</i> (South American river turtle).....	² 127,424
Varanidae:	
<i>Varanus bengalensis</i> (Bengal monitor).....	1,062
<i>Varanus griseus</i> (desert monitor).....	37
<i>Varanus flavescens</i> (yellow monitor).....	19
Boidae:	
<i>Epicrates inornatus</i> (Puerto Rico boa).....	7
<i>Python molurus molurus</i> (Indian python).....	¹ 1,046

¹ May include other non-endangered subspecies.

² May include other non-endangered *Podocnemis* species.

Source: "Amphibians and Reptiles Imported into the United States," by Stephen D. Busack. Wildlife Leaflet 506, National Fish and Wildlife Laboratory, Fish and Wildlife Service, U.S.D.I., 1974.

REPTILE PRODUCTS IMPORTED INTO THE UNITED STATES IN 1970-71, OF SPECIES SUBSEQUENTLY CLASSIFIED AS ENDANGERED UNDER THE ENDANGERED SPECIES ACT

	Leather products (items)	Skins (pieces)	Meat (pounds)	Calipee and oil (pounds)
Crocodylians:				
<i>Melanosuchus niger</i> (black caiman).....		5,588		
<i>Crocodylus niloticus</i> (Nile crocodile).....	861	69		
<i>Crocodylus porosus</i> (saltwater crocodile).....	4			
Turtles:				
<i>Chelonia mydas</i> (green sea turtle).....	74	5,502	200,900	27,695
<i>Lepidochelys olivacea</i> (olive ridley sea turtle).....		47,302		
Lizards: <i>Varanus bengalensis</i> (Bengal monitor lizard).....	4,213			
Snakes: <i>Python molurus molurus</i> (Indian python).....	¹ 1,435			
Total.....	8,839	58,461	200,900	27,695

¹ May include other nonendangered subspecies.

Source: "Amphibians and Reptiles Imported into the United States," by Stephen D. Busack. Wildlife Leaflet 506, National Fish and Wildlife Laboratory, Fish and Wildlife Service, U.S.D.I., 1974.

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NATURAL AREAS ASSOCIATION,
Rockford, Illinois, March 1, 1982.

Hon. JOHN B. BREAUX,

Chairman, House Subcommittee on Fisheries and Wildlife Conservation, and the Environment, U.S. House of Representatives, Washington, D.C.

DEAR CONGRESSMAN BREAUX: The Natural Areas Association, a non-profit organization currently having 266 members involved in natural area efforts at the local, state and federal levels, appreciates the opportunity to comment on the Endangered Species Act as the Reauthorization process gets under way. I request that this hearing be made part of the official hearing record for the oversight hearings of the Endangered Species Act Reauthorization held in the House Subcommittee on Fisheries and Wildlife Conservation and the Environment, which you chair.

The goal of the Natural Areas Association is to foster the identification, preservation, protection, and management of natural areas and other elements of natural diversity through the application of techniques consistent with sound biological and ecological principles. The majority of the membership of the Natural Areas Association is involved in the process of identifying, evaluating, protecting and managing natural areas having elements of natural diversity of statewide or national significance. Types of natural heritage features that are legitimately included in natural areas programs are habitats of rare, endangered, relict, peripheral or otherwise significant species of plants and animals. Furthermore, many members in the Natural Areas Association are association with programs which have been partially funded through the Endangered Species Act (particularly Section 6 (Cooperation with the States) and Section 15 (Authorization of Appropriations)).

The goal of the Endangered Species Act is to stop man's eradication of entire species from the face of the earth. Species of plants and animals are the living components of the world, and interrelate in countless ways (many of which are understood, and many which are not yet understood) that are of vital importance to their survival (including the survival of mankind) and to the survival of the natural communities in which they live. Because of this, one of the most immediate and pressing problems in the United States is protection of the Endangered Species Act.

The Natural Areas Association supports the following objectives in the 1982 reauthorization of the Endangered Species Act to ensure that the ESA will continue to a) provide a strong legal base for the effective conservation and recovery of species of plants and animals that are now, or may foreseeably become, in danger of extinction, and b) further the purposes and policies that it presently articulates.

The ESA must:

1. Include species of plants and animals, including foreign species, as potentially eligible for protection; and give eligible species equal opportunity for listing and for protection. Limiting the ESA, or giving listing and protection priority to different groups of organisms such as the "higher life forms" (the latter is already reflected in the Reagan Administration's Priority System for listing and for funding recovery efforts) would be a bad mistake. Such a decision would be based on short term economic interests, but would not benefit mankind in the long run. While aesthetically the larger animals may be more attractive to most people, the truth is that man is more dependent on the small species, the invertebrates and the annual plants, for our agricultural subsistence and for our pharmaceutical needs. Invertebrates and plants (the "lower life forms") form the foundation of our entire life system; they make life possible for all other living things.

2. Provide an efficient means of listing all species of plants and animals which (as now provided in the Act) are endangered or threatened for any reason, based upon the best available scientific and commercial data. Many eligible species, especially invertebrates and plants, have not been listed and are not being protected under the ESA. Reauthorization of a strong ESA will help ensure that these species have a chance to benefit from ESA, if it is not already too late to protect them from extinction.

3. Contain a strong Section 6, including provisions for adequately funded grants to states having Section 6 Cooperative Agreements for the conservation of endangered and threatened species of plants and animals. Many members of the NAA are managing projects funded through Section 6 and have been directly involved in federal/state conservation projects for listed and proposed species of plants and animals, including habitat acquisition and protection. We support an amendment to Section 6 which would appropriate a certain percentage of the total ESA funding to states having Section 6 agreements. The total elimination of Section 6 funds to the states in the FY82 budget has severely hampered, and in some cases abolished, state conservation efforts for endangered and threatened species of plants and animals.

4. Must recognize the right of the states to enact and enforce laws more restrictive than the ESA itself.

5. Allow individual populations and subspecies to be protected even though the species as a whole may not be endangered or threatened. For example, the ESA must allow for the needed protection of the Southern Bald Eagle and the Grizzly Bear, both eligible subspecies in the lower 48 states.

6. Contain provisions for the United States implementation of CITES to continue to protect foreign species by curtailing the international trade of endangered and threatened species of plants and animals listed on CITES Appendices. The United States, through the ESA, has been a leader in generating a world consciousness for the importance of conserving biological diversity.

7. Continue to authorize the acquisition of habitat for endangered and threatened species of plants and animals. Many listed, and eligible-but-not-listed species of plants and animals have this status directly because of loss of habitat. Identifying critical and essential habitat, having adequate funds for acquisition of these lands, and acquiring adequate acreages for natural maintenance of the rare populations, are some of the most critical provisions of the ESA in meeting the objectives of the Act.

8. Contain a strong Section 7 requiring federal agencies to ensure that actions authorized, funded or carried out by them will not jeopardize the continued existence of any endangered or threatened species of plant or animal, or destroy the critical habitat of any such species. This is essential to habitat protection in that it forces multiple-use-oriented federal agencies to look more carefully at the consequences of their actions. In over 9,600 occurrences requiring Section 7 Consultations, since the passage of the ESA in 1973, none stopped a federal action. The Act has balanced environmental and economic needs by protecting species without making economic activity unprofitable. Biological opinions must continue to be the responsibility of the U.S. Fish and Wildlife Service and the National Marine Fisheries Service and must be based on strictly biological considerations.

Under the Act, the exemption process comes to the aid of a project with significant economic effect. Exemption should only be allowed when there has been a good faith effort through consultation to avoid conflicts, and for projects for which there is a clearly demonstrated regional, or national economic necessity, where reasonable alternatives are absent and provided all reasonable measures to mitigate the effects of such actions are required.

9. Be adequately funded to ensure that its purposes are effectively carried out, and that it is vigorously enforced.

There is great economic, scientific and aesthetic value in the maintenance of all species of plants and animals. The survival of endangered and threatened species depends largely upon the existence of a strong Endangered Species Act. We encourage you to do everything in your power to ensure the reauthorization of such an Act.

Sincerely,

HAROLD K. GRIMMETT,
President.

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